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MEMORANDUM

September 22, 2008

TO: Rep. Brad Miller, Chairman  
Subcommittee on Investigations and Oversight

FROM: Majority Staff

RE: Attached is a staff report titled: "Toxic Trailers – Toxic Lethargy: How the Centers for Disease Control and Prevention Has Failed to Protect the Public Health." On April 1, 2008, the Subcommittee held a hearing on the Agency for Toxic Substances and Disease Registry's (ATSDR) production of its February 2007 health consultation for the Federal Emergency Management Agency (FEMA) on formaldehyde levels in travel trailers provided to survivors of Hurricanes Katrina and Rita. The attached report provides a detailed examination of ATSDR's production, approval and release of that health consultation and the agency's response to the FEMA/formaldehyde issue. It includes information provided to the Subcommittee after the April 1<sup>st</sup> hearing.

Cc: F. James Sensenbrenner Jr.  
Ranking Member  
Subcommittee on Investigations and Oversight

Bart Gordon  
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Nick Lampson  
Chairman  
Subcommittee on Energy and Environment

**“Toxic Trailers – Toxic Lethargy:  
How the Centers for Disease Control and Prevention  
Has Failed to Protect the Public Health”**

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Majority Staff Report  
Subcommittee on Investigations & Oversight  
Committee on Science & Technology  
U.S. House of Representatives

September 2008

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## Executive Summary

Created in 1980 by Congress, the Agency for Toxic Substances and Disease Registry (ATSDR), based in Atlanta, Georgia, is a federal public health agency of the U.S. Department of Health and Human Services. As part of its mandate to protect the public from harmful environmental chemicals the agency performs “public health assessments of waste sites, health consultations concerning specific hazardous substances, health surveillance and registries, response to emergency releases of hazardous substances, applied research in support of public health assessments, information development and dissemination, and education and training concerning hazardous substances.”<sup>1</sup>

The mission of ATSDR, a sister agency of the Centers for Disease Control and Prevention (CDC), “is to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances.”<sup>2</sup> Unfortunately, the agency failed to meet any of those objectives when it produced a “health consultation” on formaldehyde levels in travel trailers provided by the Federal Emergency Management Agency (FEMA) to survivors of Hurricanes Katrina and Rita in February 2007.<sup>3</sup> In almost every respect ATSDR failed to fulfill its mission to protect the public from exposure to formaldehyde at levels known to cause negative health effects. The agency’s incomplete and inadequate handling of their public health assessment, the failure to quickly and effectively correct their scientific mistakes and their reluctance to take appropriate corrective actions was all marked by notable inattention and *inaction* on the part of ATSDR’s senior leadership. As a result, tens of thousands of Hurricanes Katrina and Rita families living in trailers with elevated levels of formaldehyde were kept in harm’s way for at least one year longer than necessary.

ATSDR failed to translate its scientific findings and facts into appropriate public health actions to properly inform and warn FEMA and the tens of thousands of Hurricanes Katrina and Rita survivors living in FEMA-provided trailers and mobile homes of the potential health risks they faced from exposure to formaldehyde. Instead, ATSDR’s reaction was marred by scientific flaws, ineffective leadership, a sluggish response to inform trailer residents of the potential risks they faced, and a lack of urgency to actually remove them from harm’s way. Most disturbingly, there was a concerted and continuing effort by the agency’s leadership to both mask their own involvement in the formaldehyde study, and to push the blame for their fumbling of this critical public health issue down the line to others.

The health consultation itself, conducted at the request of FEMA’s Office of General Counsel because of expected litigation concerns, was scientifically flawed and

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<sup>1</sup> “About ATSDR,” from agency’s web-site, available here: <http://www.atsdr.cdc.gov/about.html>

<sup>2</sup> Statement of Mission, Agency for Toxic Substances and Disease Registry (ATSDR), available here: [www.atsdr.cdc.gov/mission.html](http://www.atsdr.cdc.gov/mission.html)

<sup>3</sup> “Health Consultation: Formaldehyde Sampling at FEMA Temporary Housing Units, Baton Rouge, Louisiana,” Agency for Toxic Substances and Disease Registry, February 1, 2007. [http://www.atsdr.cdc.gov/HAC/PHA/fema\\_housing\\_formaldehyde/formaldehyde\\_report\\_0507.pdf](http://www.atsdr.cdc.gov/HAC/PHA/fema_housing_formaldehyde/formaldehyde_report_0507.pdf)

omitted critical health information. The stated objectives of the environmental sampling used to develop the consultation was to establish “general baseline concentrations of formaldehyde” in 96 new unused unoccupied trailers in order to evaluate the effectiveness of two types of ventilation methods used to help reduce the level of formaldehyde below levels of health concern. Yet, the ATSDR health consultation used an inappropriate “level of concern” of 0.3 parts per million (ppm), ten times higher than ATSDR’s own Minimal Risk Level (MRL) of up to one year of exposure (0.03 ppm), and three times higher than the level of exposure widely accepted by other federal agencies to cause potential ill-health effects (0.1 ppm).<sup>4</sup> The consultation also failed to address potential long-term health effects of formaldehyde exposure, including cancer risk, and neglected to mention the fact that formaldehyde is described as a “probable” or “known” carcinogen by U.S. government agencies and international health organizations.<sup>5</sup>

Not surprisingly, the flawed report was used to provide an illusion of safety. Rather than clearly warning occupants of the health effects that could result from exposure to elevated levels of formaldehyde, the ATSDR report determined that opening windows and vents would adequately reduce formaldehyde concentrations below the level of concern. ATSDR tried to condition its conclusion, cautioning that it was “not intended to establish FEMA’s future policy concerning temporary housing units” because its conclusions could only be applied to the 96 trailers tested and not other FEMA trailers. But FEMA *did*, in fact, use the report to justify its claim that its trailers posed no health threat and to justify its policy of keeping tens of thousands of Hurricanes Katrina and Rita victims in FEMA-provided travel trailers. In addition, because the report was requested as part of ongoing litigation, FEMA asked ATSDR to keep the report “confidential.” As a result, unlike standard practice, ATSDR did not post the report on its web-site for nearly six months and once ATSDR’s leadership learned of its substantive flaws and scientific omissions, it took the agency a full eight months to issue a “revised” health consultation.

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<sup>4</sup> See the following references: “OSHA Formaldehyde – Fact Sheet,” U.S. Occupational Safety and Health Administration, 2002, [www.osha.gov/OshDoc/data\\_General\\_Facts/formaldehyde-factsheet.pdf](http://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf); “Indoor Air Quality (IAQ): Basic Information – Formaldehyde,” U.S. Environmental Protection Agency (EPA), [www.epa.gov/iaq/formalde.html](http://www.epa.gov/iaq/formalde.html); “An Update On Formaldehyde: 1997 Revision,” CPSC Document #725, U.S. Consumer Product Safety Commission, [www.cpsc.gov/cpsc/pub/pubs/725.html](http://www.cpsc.gov/cpsc/pub/pubs/725.html).

<sup>5</sup> In 2004 the International Agency for Research on Cancer (IARC) classified formaldehyde as “*carcinogenic to humans*.” See “IARC Classifies Formaldehyde As Carcinogenic To Humans,” International Agency for Research on Cancer, World Health Organization, Press Release, No. 153, June 15, 2004, [www.iarc.fr/ENG/Press\\_Releases/archives/pr153a.html](http://www.iarc.fr/ENG/Press_Releases/archives/pr153a.html); The EPA considers formaldehyde a “probable human carcinogen,” “Formaldehyde – Hazard Summary,” Environmental Protection Agency, Created in April 1992; Revised in January 2000, [www.epa.gov/ttn/atw/hlthef/formalde.html](http://www.epa.gov/ttn/atw/hlthef/formalde.html); The U.S. Department of Health and Human Services has concluded that formaldehyde is “reasonably anticipated to be a human carcinogen,” “Report on Carcinogens, Eleventh Edition,” U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, <http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s089form.pdf>.

## I. Subcommittee Findings

The Subcommittee began investigating ATSDR's production of its formaldehyde health consultation for FEMA in the fall of 2007, when Dr. Christopher De Rosa, the agency's former director of the Division of Toxicology and Environmental Medicine (DTEM), brought several concerns to the attention of the Subcommittee. Dr. De Rosa was the first to flag significant scientific errors in the ATSDR report of February 2007, and he repeatedly pushed the agency to be more responsive and take more aggressive action to address the formaldehyde issue. For his efforts, Dr. De Rosa received an "unsatisfactory" performance assessment last October and was removed from his position as director of the division of toxicology. The Subcommittee believes Dr. De Rosa is a whistleblower and was removed from his position, which he had held for 16 years, in retaliation for his persistent attempts to push the agency's leadership to take more substantive actions to protect the public's health from potential environmental hazards.

Among our findings:

1. The director of ATSDR, Dr. Howard Frumkin and his deputy, Dr. Tom Sinks, were both closely involved in the review, approval and release of the flawed February 2007 formaldehyde health consultation which contained significant scientific flaws and omitted critical public health warnings. Nevertheless, neither of them raised any concerns about its content *before* it was released.
2. Once Dr. De Rosa drew their attention to the many scientific flaws and omissions in the document, their response was remarkably muted. At Dr. De Rosa's urging, ATSDR informed FEMA of the flaws in the report, but the agency's leadership did nothing to correct the public misstatements by FEMA about the report.
3. In the wake of national news stories documenting respiratory and related symptoms of *actual* health effects from potential exposure to high levels of formaldehyde among FEMA-trailer residents, particularly among children, as well as congressional concerns about this issue, ATSDR failed to even inform trailer residents of the potential health effects they faced from exposure to formaldehyde.
4. Dr. Frumkin testified during the Subcommittee's April 1, 2008 hearing that his agency "should have engaged [the formaldehyde issue] during that first half of '07 more actively than we did."<sup>6</sup> Yet, documents provided to the Subcommittee after that hearing show that the FEMA/formaldehyde issue was on the agenda of Dr. Frumkin's weekly senior staff meetings at least 13 times between January 2007 and July 19, 2007. Despite that, the agency took virtually no action to address it.
5. Both ATSDR and the CDC repeatedly released information in 2007 and in early 2008 that failed to include the very same health information that Dr. De Rosa had

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<sup>6</sup> Unedited transcript of I&O Subcommittee hearing entitled: "Toxic Trailers: Have the Centers for Disease Control Failed to Protect the Public Health?" House Science and Technology Subcommittee on Investigations and Oversight, April 1, 2008 (hereafter: "Toxic Trailers," Unedited Hearing Transcript), p. 127.

warned would be “possibly misleading” and “a threat to public health” if it was omitted.<sup>7</sup>

6. The leadership of ATSDR obfuscated their role in reviewing and approving the February 2007 health consultation and attempted to abdicate their own responsibility for the agency’s fundamental failure to protect the public’s health.
7. Most disturbingly, as the agency’s troubled response to the formaldehyde fiasco unraveled, the leadership of ATSDR attempted to shift blame for the inappropriate handling of the incident to others, primarily Dr. De Rosa and his staff.

The agency’s continuing lackluster response to critical issues that impact the scientific integrity of the public health documents they release has also called into question the ability of the agency’s leadership to lead and direct an agency that is tasked with protecting the public’s health. The protocols for a planned Children’s Health Study on exposures to formaldehyde have not yet been finalized, for instance. The agency has been extraordinarily slow in taking any substantive actions to initiate its planned medical registry of individuals who have lived in FEMA-provided travel trailers for future potential follow up. The agency’s Board of Scientific Counselors charged with studying ATSDR’s clearance and peer review process does not expect to have a draft report completed until November 2008, a full 21 months after ATSDR’s leadership became aware of serious problems in the agency’s clearance process. An external contractor to examine the agency’s internal management, including that of the director, deputy director and division directors, has only just been hired. It seems that CDC overall, continues to fumble the formaldehyde issue. Furthermore, the agency’s ability to effectively address these fundamental problems and its ability to function successfully is marred by lethargy.

## II. Background

Hurricane Katrina made landfall on August 29, 2005, displacing approximately 770,000 people and destroying or making uninhabitable an estimated 300,000 homes.<sup>8</sup> It was the single most catastrophic natural disaster in U.S. history.<sup>9</sup> Less than one month later, on September 24, 2005, Hurricane Rita struck the Gulf Coast.<sup>10</sup> These hurricanes left tens of thousands of individuals and families homeless in Louisiana, Mississippi, Alabama and Texas. In response, FEMA provided more than 140,000 mobile homes and travel

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<sup>7</sup> Draft letter dated February 27, 2007 from Christopher De Rosa to Patrick Preston.

<sup>8</sup> “The Federal Response to Hurricane Katrina: Lessons Learned,” February 2006, The White House, available here: <http://www.whitehouse.gov/reports/katrina-lessons-learned.pdf>

<sup>9</sup> “Hurricane Katrina, One-Year Later,” Press Release Number: HQ-06-127, August 22, 2006, Federal Emergency Management Agency, available here: [www.fema.gov/news/newsrelease.fema?id=29108](http://www.fema.gov/news/newsrelease.fema?id=29108)

<sup>10</sup> “Countdown To Landfall: Actions Recounted As Hurricane Rita Approached,” Press Release Number 1606-252, September 19, 2006, Federal Emergency Management Agency, available here: [www.fema.gov/news/newsrelease.fema?id=30020](http://www.fema.gov/news/newsrelease.fema?id=30020)

trailers known as temporary housing units, to individuals and families across the Gulf Coast.<sup>11</sup>

Because of the materials used in their construction, these manufactured homes have long been known to contain elevated levels of formaldehyde. Formaldehyde is a colorless, strong-smelling gas that is produced at very low levels in the human body and is used in cosmetics, medicines and as a food preservative. It is also widely used in the building industry as an adhesive in many consumer products, including plywood, particle board, carpet, and upholstery. Travel trailers and mobile homes are widely composed of these products, and therefore may have correspondingly high levels of formaldehyde, particularly when they are new and still off-gassing formaldehyde. Over time the levels of formaldehyde in these products normally decreases. Still, some trailers have shown elevated levels of formaldehyde even after years of use.

The regulation of formaldehyde and its potential health effects has been embroiled in controversy for decades. In 1981, then-Congressman Al Gore, as chairman of the Investigations and Oversight Subcommittee of the House Science and Technology Committee, held several hearings on formaldehyde and particularly on the Occupational Safety and Health Administration's (OSHA) treatment of OSHA whistleblower Peter Infante, who was pushing for tighter regulation of formaldehyde due to its potential carcinogenic effects.<sup>12</sup> In 1987 OSHA reduced the amount of formaldehyde exposure for workers over an eight-hour period from 3 ppm to 1 ppm.<sup>13</sup> In 1992, OSHA further reduced the level of worker exposure to 0.75 ppm.<sup>14</sup>

These regulatory levels of exposure, however, were only meant for healthy adult workers over a normal eight hour work-day of exposure. Studies in the 1980s documented adverse health effects for individuals living in travel trailers and mobile homes from exposure to much lower levels of formaldehyde. These studies appeared in *Minnesota Medicine* in February 1980,<sup>15</sup> the *Archives of Environmental Health* in November/December 1981,<sup>16</sup> *American Journal of Public Health* in March 1987<sup>17</sup> and

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<sup>11</sup> "FEMA's Ongoing Response to Formaldehyde," FEMA Press Release Number: HQ-08-002b, February 12, 2008. The press release says FEMA provided 143,752 mobile homes and travel trailers to survivors of Hurricanes Katrina and Rita throughout the Gulf Coast.

<sup>12</sup> Nicholas A. Ashford, C. William Ryan and Charles C. Caldart, "A Hard Look at Federal Regulation of Formaldehyde: A Departure from Reasoned Decisionmaking," *Harvard Environmental Law Review*, Harvard University, Volume 7, pp. 297-370, 1983.

<sup>13</sup> "Occupational Exposure to Formaldehyde: Final Rule," U.S. Occupational Safety and Health Administration (OSHA), Code of Federal Regulations 29 CFR 1910.1048, published in the Federal Register 52:46168-46312, December 4, 1987.

<sup>14</sup> "Occupational Exposure to Formaldehyde: Final Rule, U.S. Occupational Safety and Health Administration (OSHA), Code of Federal Regulations 29 CFR 1910.1048, published in the Federal Register 57:22290, May 27, 1992.

<sup>15</sup> Vincent F. Garry, et. al., "Formaldehyde in the Home: Some Environmental Disease Perspectives," *Minnesota Medicine*, Minnesota Department of Health, February 1980.

<sup>16</sup> Kay Dally, et. al., "Formaldehyde Exposure in Nonoccupational Environments," *Archives of Environmental Health*, November/December 1981, Vol. 36, No. 6.

<sup>17</sup> Ingrid M. Ritchie and Robert N. Lehnen, "Formaldehyde-related Health Complaints of Residents Living in Mobile and Conventional Homes," *American Journal of Public Health*, March 1987, Vol. 77, No. 3.

Environmental Health Perspectives in 1991,<sup>18</sup> for instance. In 1999, ATSDR published its own 421-page Toxicological Profile for Formaldehyde that also identified medical studies that indicated health effects from exposure to low levels of formaldehyde.<sup>19</sup>

In the immediate aftermath of Hurricanes Katrina and Rita no one anticipated that tens of thousands of families placed in FEMA temporary housing units would be in these units for months or even years. Still, by October 2005, concerned about the health consequences of formaldehyde exposures to FEMA workers, OSHA began testing for formaldehyde in FEMA temporary housing staging areas in the Gulf Coast and discovered high levels of formaldehyde.<sup>20</sup> Despite that fact, no federal agency initiated testing of "occupied" trailers until more than two years later.

In November 2005, Dr. Howard Frumkin, who took over as director of both the National Center for Environmental Health (NCEH) and the Agency for Toxic Substances and Disease Registry (ATSDR) two months earlier, seemingly recognized the health risks from the toxic chemicals being unleashed into the environment in the wake of Hurricane Katrina, including formaldehyde. "In many ways," Dr. Frumkin told Knight Ridder Newspapers, "this is the major environmental health disaster of our lifetime." The same article described the "burning storm debris, increased diesel exhaust, runaway mold and fumes from glue and plywood in new trailers [that] are irritating people's lungs and nasal passages."<sup>21</sup> The reporters interviewed one trailer occupant who complained of the health problems that he and his girlfriend suffered from as a result of living in their FEMA-provided trailer. At the time, the suspected culprits causing these reactions were unclear, but were attributed to mold, formaldehyde or other chemicals.

Although Dr. Frumkin told Subcommittee staff that he did not believe there was anything preventing his agency from initiating an investigation into the potential health effects of formaldehyde or other chemicals on its own, ATSDR did not do so. Dr. Sinks, however, was particularly proud of the fact that the CDC did launch several investigations into the potential health implications of mold in relation to Hurricane Katrina.<sup>22</sup> But

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<sup>18</sup> Kai-Shen Liu, et. al., "Irritant Effects of Formaldehyde Exposure in Mobile Homes," *Environmental Health Perspectives*, Vol. 94, 1991.

<sup>19</sup> "Toxicological Profile for Formaldehyde," U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, Georgia, July-1999, available here: <http://www.atsdr.cdc.gov/toxprofiles/tp111.pdf>

<sup>20</sup> "2005 Gulf-Coast Hurricane Response - OSHA Gas and Vapor Monitoring Data," Occupational Safety and Health Administration, U.S. Department of Labor. [www.osha.gov/katrina/lisareports/gandy\\_combined.html](http://www.osha.gov/katrina/lisareports/gandy_combined.html)

<sup>21</sup> Seth Borenstein and Chris Adams, "Health problems abound months after Katrina roared ashore," Knight Ridder Washington Bureau, November 30, 2005.

<sup>22</sup> The CDC published two reports on mold related health problems related to Hurricanes Katrina and Rita in January and June 2006. "Health Concerns Associated with Mold in Water-Damaged Homes After Hurricanes Katrina and Rita --- New Orleans Area, Louisiana, October 2005," *Morbidity and Mortality Weekly Report*, Weekly, Centers for Disease Control and Prevention, January 20, 2006 / 55(02); 41-44. [www.cdc.gov/mmwr/preview/mmwrhtml/mm5502a6.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5502a6.htm) and "Mold Prevention Strategies and Possible Health Effects in the Aftermath of Hurricanes and Major Floods," *Morbidity and Mortality Weekly Report*, Recommendations and Reports, Centers for Disease Control and Prevention, June 9, 2006, 55(RR08); 1-27. [www.cdc.gov/mmwr/preview/mmwrhtml/tr5508a1.htm](http://www.cdc.gov/mmwr/preview/mmwrhtml/tr5508a1.htm)

neither ATSDR nor CDC's leadership ever had the same level of interest in formaldehyde, even after the potential health problems with formaldehyde exposure were widely known and reported in the media. Part of that response may be explained by the fact that senior leadership at ATSDR did not believe formaldehyde was an important health issue. "Formaldehyde mostly has an irritation effect, it is not a serious health concern," Dr. Sinks told Subcommittee staff.<sup>23</sup> That basic attitude seems to have driven and undermined ATSDR's response to the formaldehyde issue. It also seems to have collided sharply with Dr. De Rosa's efforts to take the potential health implications of exposures to elevated levels of formaldehyde much more seriously.

### III. FEMA Formaldehyde Complaints

In March 2006, the media began reporting on complaints of high levels of formaldehyde in FEMA-provided trailers.<sup>24</sup> On March 16, 2006, a Biloxi, Mississippi television station, WLOX-TV, ran a story about Paul and Melody Stewart, a Bay St. Louis couple who discovered high levels of formaldehyde in their FEMA-provided trailer. The Stewart's ran a formaldehyde test on their own after they both began suffering from burning eyes and nose, scratchy throats and nasal headaches. "Exposure to formaldehyde over the long term will cause lung cancer, nose cancer, throat cancer," Paul Stewart told the TV station. "Formaldehyde is a carcinogen," he said, "It's listed as a carcinogen by the government and exposure of high levels of it can cause cancer."<sup>25</sup>

In April 2006, after hearing about the high level of formaldehyde found in Paul and Melody Stewart's trailer, the Sierra Club began testing other FEMA trailers.<sup>26</sup> Sixteen of the seventeen trailers it tested (or 94 percent) between April and June 2006 showed levels of formaldehyde above 0.1 ppm.<sup>27</sup> This is a level of exposure widely shown to elicit adverse health symptoms, including irritation of the eye, nose, and throat; wheezing and coughing; fatigue; skin rash; and severe allergic reactions, among some individuals. The Environmental Protection Agency<sup>28</sup>, Consumer Product Safety Commission<sup>29</sup>, National Cancer Institute<sup>30</sup>, and Occupational Safety and Health Administration<sup>31</sup>, all cite 0.1 ppm as the level at which these reactions may occur in some people.

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<sup>23</sup> Subcommittee staff interview with Dr. Tom Sinks, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 24, 2008.

<sup>24</sup> "Flimsy shelters, flimsy rationales," Editorial, Omaha World-Herald, March 23, 2006.

<sup>25</sup> Al Showers, "Couple Discovers High Levels of Formaldehyde In FEMA Trailer," Updated March 17, 2006, WLOX-TV. <http://www.wlox.com/Global/story.asp?S=4643952&nav=6DJI>

<sup>26</sup> "Toxic Trailers? Tests Reveal High Formaldehyde Levels in FEMA Trailers," Sierra Club, Updated April 2008. [http://www.sierraclub.org/gulfcoast/downloads/formaldehyde\\_test.pdf](http://www.sierraclub.org/gulfcoast/downloads/formaldehyde_test.pdf)

<sup>27</sup> "Sierra Club testing shows high levels of formaldehyde in FEMA trailers," undated document provided to Subcommittee by Becky Gillette, Formaldehyde Campaign Director, Sierra Club Gulf Coast Environmental Restoration Task Force.

<sup>28</sup> "Formaldehyde - Basic Information - Indoor Air Quality (IAQ)," Environmental Protection Agency, <http://www.epa.gov/iaq/formalde.html>

<sup>29</sup> "Update On Formaldehyde: 1997 Revision," Consumer Product Safety Commission, CPSC Document #725, <http://www.cpsc.gov/CPSCPUB/PUBS/725.html>

<sup>30</sup> "Formaldehyde and Cancer: Questions and Answers - Fact Sheet," National Cancer Institute, <http://www.cancer.gov/cancertopics/factsheet/Risk/formaldehyde>

Like all allergic reactions, some individuals may react to low levels of formaldehyde, while others can tolerate much higher levels of exposure without exhibiting any adverse symptoms. Children, the elderly and individuals with respiratory problems, such as asthmatics, for instance, are particularly susceptible to adverse reactions to relatively low levels of exposure to formaldehyde. Overall, the Sierra Club tested 69 trailers and found 61 of them had levels of formaldehyde above 0.1 ppm.

As the results of the Sierra Club and other private tests<sup>32</sup> became widely known, FEMA staff began debating whether or not to conduct their own larger scale tests of formaldehyde levels in trailers. They also struggled to determine what levels of formaldehyde exposures they should use as a benchmark indicative of a potential health threat to trailer residents. By this time it was becoming clear to many that some of the FEMA-trailers contained elevated levels of formaldehyde and some residents were affected.

In mid-May 2006, a class action lawsuit was filed in the U.S. District Court for the Eastern District of Louisiana against the U.S. Government and several recreational vehicle manufacturers who provided the trailers to FEMA.<sup>33</sup> The suit claimed that high levels of formaldehyde emitted from FEMA trailers caused “a clear and present danger to the health and well-being” of the trailer occupants. The federal government, the suit said, was “grossly negligent, reckless, and/or willful” in “providing mobile homes and trailers to occupants which was dangerous, unhealthy and unsafe due to high levels of formaldehyde emissions.”

Despite continuing discussions among FEMA employees about how to appropriately respond to this growing issue, FEMA Headquarters had already made up its mind. In an e-mail on May 27, 2006, FEMA employee Stacy Suchodolski wrote: “According to HQ there are no health concerns associated with the formaldehyde inside our FEMA MH/TT [mobile homes/travel trailers].”<sup>34</sup> But at the same time, the California Environmental Protection Agency’s Air Resources Board (ARB) was proposing even tighter restrictions on the permissible levels of formaldehyde in the “composite wood products” used in the manufacture of such homes.<sup>35</sup> In 1992, the California ARB had identified formaldehyde as a “toxic air contaminant” and the State determined that no safe exposure threshold level existed for formaldehyde to preclude cancer.<sup>36</sup> In 2007, California

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<sup>31</sup> “OSHA Formaldehyde Fact Sheet,” Occupational Safety and Health Administration, Department of Labor, 2002, [http://www.osha.gov/OshDoc/data\\_General\\_Facts/formaldehyde-factsheet.pdf](http://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf)

<sup>32</sup> “Case Narrative: An Evaluation of Formaldehyde Concentration in the Carlton and Dawn Sistrunk FEMA Trailer, 15 Delma Street, Baxterville, MS,” Michael S. Bonner, Ph.D., Bonner Analytical Testing Company, Hattiesburg, Mississippi, Thursday, April 6, 2006.

<sup>33</sup> Hillard vs. United States Government, Complaint, Civil Action 06-2576, U.S. District Court, Eastern District of Louisiana, filed on May 18, 2006.

<sup>34</sup> E-mail dated May 27, 2006 from Stacy Suchodolski to Geraldine Cox, “Formaldehyde.”

<sup>35</sup> Rulemaking Process, Activity Summary - Composite Wood Products – Airborne Toxic Control Measure, California Environmental Protection Agency’s Air Resources Board, [www.arb.ca.gov/toxics/compwood/process.htm](http://www.arb.ca.gov/toxics/compwood/process.htm)

<sup>36</sup> “Fact Sheet: Airborne Toxic Control Measure (ATCM) to Reduce Formaldehyde Emissions from Composite Wood Products,” California Environmental Protection Agency, Air Resources Board,

passed regulations that are to be phased in over the next several years, drastically reducing the amount of formaldehyde permissible in “composite wood products.”<sup>37</sup>

The federal guidance levels and standards for formaldehyde, however, vary greatly. In 1985, the Department of Housing and Urban Development (HUD) established standards that regulated the amount of formaldehyde permissible in wood products used in homes.<sup>38</sup> The HUD standard set a formaldehyde emission level of 0.2 ppm for plywood and 0.3 ppm for particle board. But these standards only applied to mobile homes, not to the “recreational vehicles,” like travel trailers, in which many hurricane victims lived for years.

In the occupational environment, OSHA limits formaldehyde exposure for workers to 0.75 ppm<sup>39</sup> over an eight-hour time period, while NIOSH has a limit of 0.016 ppm<sup>40</sup> over the same interval. ATSDR has four separate guidance or minimal risk levels (MRL) for exposure to formaldehyde.<sup>41</sup> It has a chronic exposure level of 0.008 ppm for exposures lasting 365 days or more, an intermediate MRL of 0.03 ppm for exposures between 15 and 364 days, an acute MRL of 0.04 ppm for exposures of 14 days or less, and ATSDR’s Medical Management Guideline for exposure to formaldehyde in emergency response conditions is set at 0.3 ppm.

Despite the fact that FEMA headquarters was denying any problems with formaldehyde, FEMA staff were attempting to determine how to appropriately respond. During this time frame, in the spring of 2006, Dr. De Rosa says a FEMA official from the Gulf Coast contacted him to review a flyer on formaldehyde that FEMA intended to pass out to occupants of FEMA trailers describing potential health effects from exposure to formaldehyde. As far as the flyer went, Dr. De Rosa says, it was fine. But it neglected to mention potential long-term consequences of formaldehyde exposure. The FEMA official, says De Rosa, did not contact him again. The Subcommittee never received any

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<http://www.arb.ca.gov/toxics/compwood/factsheet.pdf>

<sup>37</sup> “Final Regulation Order: Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products,” California Environmental Protection Agency, Air Resources Board, <http://www.arb.ca.gov/regact/2007/compwood07/fro-final.pdf>

<sup>38</sup> U.S. Code of Federal Regulations (CFR), Title 24-Housing and Urban Development, Part 3280-Manufactured Home Construction and Safety Standards, Sub-Part 3280.308, “Formaldehyde emission controls for certain wood products,” U.S. Department of Housing and Urban Development. Under Sub-Part 3280.309, “Health Notice on formaldehyde emissions,” manufactured homes were also required to display a “health notice” that warned, in part: “Some of the building materials used in this home emit formaldehyde. Eye, nose, and throat irritation, headache, nausea, and a variety of asthma-like symptoms, including shortness of breath, have been reported as a result of formaldehyde exposure. Elderly persons and young children, as well as anyone with a history of asthma, allergies, or lung problems, may be at greater risk. Research is continuing on the possible long-term effects of exposure to formaldehyde.”

[http://www.access.gpo.gov/nara/cfr/waisidx\\_06/24cfr3280\\_06.html](http://www.access.gpo.gov/nara/cfr/waisidx_06/24cfr3280_06.html)

<sup>39</sup> “Occupational Exposure to Formaldehyde,” Occupational Safety and Health Administration, U.S. Department of Labor, Program Highlights, Fact Sheet No. OSHA 92-27

<sup>40</sup> “NIOSH Pocket Guide to Chemical Hazards – Formaldehyde,” National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention, September 2005.

<sup>41</sup> “Toxicological Profile for Formaldehyde,” U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), Atlanta, Georgia, July 1999, available here: <http://www.atsdr.cdc.gov/toxprofiles/tp111.pdf>

documentation on this apparent inquiry, however, from either Dr. De Rosa, FEMA or ATSDR.

While some FEMA employees struggled to determine what levels of exposure they should use to determine whether or not residents were exposed to unsafe levels of formaldehyde and when or how to conduct potential tests, they clearly knew that employing some of the established "minimal risk levels" set by ATSDR, for example, would provide them with problematic answers. On June 2, 2006, William Ringo, a FEMA Occupational Safety and Health Officer, wrote a memo for the record regarding some of the proposed FEMA testing protocols.<sup>42</sup> "If the ATSDR level is used the likelihood is that ANY trailer manufactured within the last two months will be above the limit," he wrote.

On June 14, 2006, Patrick ("Rick") Edward Preston, a trial attorney in FEMA's Office of General Counsel was assigned to the class action lawsuit which had been filed the previous month and became one of FEMA's lead officials handling the agency's response to the formaldehyde issue. FEMA went into litigation mode. The next day Preston warned that FEMA should not begin testing. "Do not initiate any testing until we give the OK," Preston wrote his FEMA colleagues. "While I agree that we should conduct testing, we should not do so until we are fully prepared to respond to the results. Once you get results and should they indicate some problem, the clock is running on our duty to respond to them," he wrote.<sup>43</sup> The decision not to conduct testing soon changed, but the scope of the testing that did move forward shied away from testing *occupied* trailers.

#### IV. Formaldehyde Interagency Conference Calls

The Environmental Protection Agency (EPA) had been talking with FEMA about the possibility of testing trailers since early 2006, according to Sam Coleman, the director of EPA's Region 6 Superfund Division.<sup>44</sup> In June 2006, Coleman, who had worked closely with ATSDR's Emergency Response Team on other Hurricane Katrina related public health issues, telephoned his ATSDR contact, Scott Wright who was an Emergency Response Coordinator in the Prevention Response and Medical Support Branch of ATSDR's Division of Toxicology and Environmental Medicine (DTEM). Coleman informed Wright that FEMA wanted to initiate a teleconference to discuss the formaldehyde issue because a trailer resident who had been complaining of formaldehyde levels in his trailer in Slidell, Louisiana in St. Tammany's Parish had died, and the Sierra Club claimed that the death could be linked to excessive levels of formaldehyde.<sup>45</sup>

Within ATSDR, the Office of Terrorism Preparedness and Emergency Response (OTPER), is the office that had been involved in dealing with the agency's response to Hurricanes Katrina and Rita related public health issues. That office had coordinated the

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<sup>42</sup> William P. Ringo, FEMA, Occupational Safety and Health Officer, "Memo For Record," June 2, 2006.

<sup>43</sup> Internal e-mail dated June 15, 2006 from Patrick Preston, Trial Attorney, Office of General Counsel, Federal Emergency Management Agency

<sup>44</sup> Subcommittee telephone interview with Sam Coleman, Director of EPA's Region 6 Superfund Division February 27, 2008.

<sup>45</sup> Internal e-mail from Gil Jamieson, "Subject: Re: Urgent: Death of Applicant," Tuesday, June 27, 2006.

agency's emergency response operations related to Hurricane Katrina on dozens of previous occasions through a streamlined structure established by ATSDR Director Frumkin. Scott Wright followed those same procedures in responding to this request for assistance as well. After receiving the call from Coleman, Scott Wright informed Don Benken, then the acting deputy director of OTPER, about the proposed interagency conference call. Unlike the four separate divisions within ATSDR, OTPER is situated directly within ATSDR's Office of the Director and reports directly to Dr. Frumkin.<sup>46</sup> Wright and Joseph D. Little, a commander in the U.S. Public Health Service who was also an ATSDR Emergency Response Coordinator in DTEM, became the two primary contacts at the agency with FEMA on the formaldehyde issue.

Starting in June, these interagency conference calls occurred every two weeks and included representatives from FEMA, EPA, ATSDR and CDC. At the time, according to Wright, there were an estimated 120,000 FEMA-temporary housing units in the Gulf Coast. He said FEMA was worried that the public perception of the Slidell man's death might increase fears of formaldehyde among trailer residents. Those concerns were at the heart of the initial conference call that occurred on June 28, 2006. "To say initially it was a P.R. problem is probably accurate," Scott Wright said.<sup>47</sup> It was also clear FEMA was very concerned about litigation involving formaldehyde levels in the trailers.<sup>48</sup>

Meanwhile, the EPA and ATSDR advised FEMA against testing occupied trailers. They said this would be very difficult because of the "confounding" factors involving "lifestyle" issues, such as smoking and alcohol use, which could skew the results because tobacco and alcohol contain formaldehyde. The EPA's Sam Coleman said testing would likely show that "the trailers would likely have more formaldehyde in the air than was acceptable."<sup>49</sup> Officials at ATSDR shared similar reservations about testing the trailers.

## **V. ATSDR Approval to "Engage" EPA and FEMA on the Formaldehyde Issue**

After the June 28 call, Benken, the acting deputy director of OTPER physically walked into Dr. Tom Sinks' office to brief him on the call.<sup>50</sup> Benken said it was also clear from this call that EPA and FEMA were looking to ATSDR/CDC to provide a "health study" or evaluation of the formaldehyde levels in trailers that EPA would potentially obtain if testing went forward. Benken told this to Dr. Sinks, and also told him that FEMA's Office of General Counsel was involved on the call, because of claims that the death of the Slidell man was potentially linked to exposure to formaldehyde. "I had a conversation with Tom Sinks," said Benken. "He told me to write an e-mail to Sam

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<sup>46</sup> To see a chart of the organizational structure of ATSDR as it existed in the summer of 2006 see the link below. Don Benken was the deputy to Dr. Mark Keim, Acting Associate Director for Terrorism Preparedness & Emergency Response (OTPER) at the time. Dr. Keim and OTPER reported directly to Director Frumkin. [http://web.archive.org/web/20060806140827/http://www.cdc.gov/nceh/information/org\\_chart.pdf](http://web.archive.org/web/20060806140827/http://www.cdc.gov/nceh/information/org_chart.pdf)

<sup>47</sup> Subcommittee staff interview with Scott Wright, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

<sup>48</sup> Minutes: Centers for Disease Control and Environmental Protection Agency Teleconference, Wednesday, June 28, 2006, Office of Travis Ratcliff.

<sup>49</sup> Subcommittee staff phone interview with Sam Coleman, February 27, 2008.

<sup>50</sup> Subcommittee staff phone interview with Don Benken, February 25, 2008.

Coleman” telling him that ATSDR would be happy to help in any way we could.<sup>51</sup> While Dr. Sinks told Subcommittee staff that he did not recall hearing about the death of the man in the trailer until the summer of 2007, he did acknowledge that he authorized Benken to offer ATSDR’s assistance to FEMA. “Basically I said yes, we should be engaged,” Dr. Sinks recalled.<sup>52</sup>

In his e-mail to Coleman, Benken expressed the agency’s continued reluctance for testing, but said “if they [FEMA] determine that it is still a viable mission assignment, we will be willing to review the protocol for testing to determine the best collection methods and determine if we can measure the benefit from a public health perspective.”<sup>53</sup> Coleman responded later that morning. “I spoke to them [FEMA] on Monday,” he wrote.<sup>54</sup> “They continue to want to do some testing. I suggested that we have followup conf call this week. Additionally, I strongly suggest that this is a policy decision,” Coleman advised. “We need to brief the Agency leadership to assure that we are all together.” Tom Sinks was copied on both e-mails and should have clearly been aware of the work he had authorized his agency to engage in with FEMA, its potential policy implications and the fact FEMA’s Office of General Counsel was involved.

Handwritten notes maintained by Joe Little during the interagency conference calls in a “log book” makes clear that litigation against FEMA and the trailer manufacturers was an issue of intense concern among the conference call participants.<sup>55</sup> In addition, Little noted that “most structures” would exceed ATSDR’s 0.03 ppm exposure level for formaldehyde and he noted that 0.3 ppm is a level of exposure for sensitive individuals that may initiate narrowing of the bronchi. In interviews with Subcommittee staff, Little said he was never asked to pick any specific “level of concern” for formaldehyde by FEMA or anyone else. He said he chose the 0.3 ppm “level of concern” because it was the most practical and because there was only a “vague association” to ill health effects below that level of exposure.<sup>56</sup>

As the federal government sorted out the scope of its planned tests to determine formaldehyde levels in the trailers on these conference calls, the real world health implications of exposure to high levels of formaldehyde in the trailers were already being reported by the press, the public and Congress. A Gulf Coast citizens group held a press conference on the issue on Tuesday, July 18, 2006 in Gulfport, Mississippi, calling on

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<sup>51</sup> Subcommittee staff phone interview with Don Benken, February 25, 2008.

<sup>52</sup> Subcommittee staff interview with Dr. Tom Sinks, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 24, 2008,

<sup>53</sup> E-mail dated July 5, 2006 from Don Benken to Sam Coleman, cc’d to Tom Sinks and Mark Keim, “Re: FEMA Conf. Call Number.”

<sup>54</sup> E-mail dated July 5, 2006 from Sam Coleman to Don Benken, cc’d to Tom Sinks, Mark Keim, R.E. Greene, David Gray, L. Starfield, and Dana Tulis, “Re: FEMA Conf. Call Number.”

<sup>55</sup> Joe Little, notes from log book, *supra*.

<sup>56</sup> Subcommittee staff interviews with Joseph Little, ATSDR/CDC, Atlanta, Georgia, February 12, 2008, and Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

FEMA to conduct formaldehyde testing on its travel trailers.<sup>57</sup> On July 24, 2006, MSNBC ran a report titled: "Are FEMA Trailers 'Toxic Tin Cans'?"<sup>58</sup> On July 25, Congressman Tom Davis, then the Chairman of the House Committee on Government Reform, sent a letter to Department of Homeland Security Secretary Michael Chertoff raising the issue of high levels of formaldehyde in the trailers.<sup>59</sup> As the one-year anniversary of Katrina on August 29, 2006 drew near, many media outlets reported on the FEMA/formaldehyde issue. Between July 1, 2006 and September 1, 2006 there were 65 news stories that reported on the issue, according to a keyword search of "formaldehyde" and "FEMA" on FACTIVA, a subscription-based news search service provided by Dow Jones & Company.

## VI. February 2007 Health Consultation

By August 2006, as a result of the interagency conference calls, FEMA, the EPA and ATSDR had developed plans for sampling the formaldehyde levels in FEMA trailers. It was decided that the EPA would collect environmental samples of formaldehyde levels in 96 new unoccupied travel trailers using two ventilation methods: by running the air conditioning with the bathroom vents open, and by opening the windows and vents. The EPA sampling data would then be analyzed and interpreted by ATSDR. The EPA tests were run in September and October 2006 and the data was provided to FEMA attorney Rick Preston in November. Preston then provided a DVD disk of the test results to Scott Wright at ATSDR, which was received in early December 2006.

On Friday, Dec. 1, 2006, the EPA's Sam Coleman sent an e-mail to Joe Little and Scott Wright, expressing his concerns about FEMA's interpretation of the formaldehyde data. "We at EPA are concerned that FEMA might not be properly interpreting the data," Coleman warned.<sup>60</sup> "We urge CDC to complete its review as soon as possible to provide appropriate advice to FEMA." Coleman had copied a number of other EPA employees on his e-mail, as well as Dr. Howard Frumkin, Director of ATSDR.

According to a Subcommittee staff interview with Dr. Frumkin and internal ATSDR correspondence, it appears that this was the first time that Dr. Frumkin became aware of any of the work his agency was doing for FEMA regarding the formaldehyde issue. The next morning, Dr. Frumkin e-mailed Joe Little and Scott Wright saying: "I didn't know that this was happening. Can you let me know who at our end is handling it?"<sup>61</sup> Realizing the potential importance of this issue and ATSDR's role, Dr. Frumkin

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<sup>57</sup> The Amos Network, a new Gulf Coast citizens group, held a press conference calling for an immediate inspection of FEMA trailers for possible unhealthy levels of formaldehyde at the Isiah Fredericks Community Center in Gulfport, Mississippi on Tuesday, July 18, 2006 at 10 a.m.

<sup>58</sup> "Are FEMA trailers 'toxic tin cans'? Private testing finds high levels of formaldehyde; residents report illnesses," Mike Bruner, Projects editor, MSNBC.com, Updated 12:57 p.m., Tuesday, July 25, 2006. [www.msnbc.msn.com/id/14011193/](http://www.msnbc.msn.com/id/14011193/)

<sup>59</sup> Tom Davis, Chairman of the House Committee on Government Reform, letter to Michael Chertoff, Secretary of the Department of Homeland Security, July 25, 2006.

<sup>60</sup> E-mail dated December 1, 2006 from Samuel Coleman to Joseph Little and Scott Wright, "FW: Summary of bi-monthly formaldehyde conference call."

<sup>61</sup> E-mail dated December 2, 2006 from Dr. Howard Frumkin to Joseph Little and Scott Wright, "RE: Summary of bi-monthly formaldehyde conference call."

even called Scott Wright on his cell phone on Wright's day off to ask about the extent of ATSDR's involvement in the formaldehyde work with EPA and FEMA.<sup>62</sup>

On Dec 4, 2006, Phillip M. ("Mike") Allred, who had become the Deputy Director of Director Frumkin's Office of Terrorism Preparedness and Emergency Response (OTPER) in November 2006, succeeding Don Benken, suggested that Little and Wright provide a summary of the issue to Dr. Frumkin.<sup>63</sup> Little prepared a background chronology of ATSDR's involvement on the formaldehyde issue that same day and e-mailed it to Dr. Frumkin later that afternoon. Little copied several other ATSDR officials on the e-mail, including Dr. Sinks and Dr. De Rosa. The summary Little prepared clearly said that he and Scott Wright were awaiting delivery of the EPA formaldehyde sampling data from "Rick Preston from FEMA's Office of General Council [*sic*]."<sup>64</sup> According to Scott Wright, he received the sampling data from Rick Preston later that day.<sup>65</sup>

After reading Little's summary, Dr. Frumkin sent an e-mail to Dr. Chris De Rosa the following evening regarding ATSDR's work with FEMA on the formaldehyde issue. "Chris," wrote Dr. Frumkin, "This came up on my radar screen recently, and I had to ask Joseph for an explanation since I hadn't heard anything about it. For activities that reach across to other agencies, and/or that are liable to involve any controversy, it really helps me to be kept up to date. Our weekly Senior Staff meetings are designed for these sorts of exchanges. Will that work for you?" Dr. Frumkin asked.<sup>66</sup>

Surprisingly, Dr. Frumkin was *unaware* that his deputy, Dr. Tom Sinks, already knew of ATSDR's work on formaldehyde for FEMA and that Dr. Sinks had actually approved of the agency's involvement in the summer of 2006, when he was briefed on the issue by Don Benken. "I assumed that he [Sinks] briefed Frumkin," Benken told the Subcommittee.<sup>67</sup> In interviews with Subcommittee staff, Dr. Sinks did not recall if he briefed Dr. Frumkin on this issue at the time, but did recall his conversation with Don Benken, and said that he advised Benken that ATSDR should be "engaged" with FEMA on this issue. Dr. Frumkin said he was not aware of ATSDR's participation with FEMA on this issue until he received the Dec. 1, 2006 e-mail from Sam Coleman.

The letter from FEMA's Rick Preston to ATSDR's Scott Wright accompanying the delivery of the disk said in part, "Please review the data and provide to me a written report of your analysis of the results of these tests and any conclusions or recommendations that

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<sup>62</sup> Subcommittee staff interview with Scott Wright, ATSDR/CDC, Atlanta, Georgia, Feb. 12, 2008.

<sup>63</sup> E-mail dated December 4, 2006 from Mike Allred to Joseph Little, Scott Wright and Jim Holler, "RE: Summary of bi-monthly formaldehyde conference call."

<sup>64</sup> E-mail dated December 4, 2006 from Joseph Little to Dr. Howard Frumkin, Tom Sinks, et al., "RE: Summary of bi-monthly formaldehyde conference call." (Hereafter: Joe Little, Dec. 4, 2006 chronology.)

<sup>65</sup> Subcommittee staff interview with Scott Wright, ATSDR/CDC, Atlanta, Georgia, Feb. 12, 2008. The letter from Rick Preston to Wright was dated Nov. 30, 2006, but was received by Wright on Dec. 4, 2006.

<sup>66</sup> E-mail dated December 5, 2006 from Howard Frumkin to Christopher De Rosa, "FW: Summary of bi-monthly formaldehyde conference call."

<sup>67</sup> Subcommittee telephone interview of Don Benken, former Acting Associate Director of OTPER, February 25, 2008.

can be derived therefrom.”<sup>68</sup> Although Dr. De Rosa said he was aware of the informal assistance his staff was providing to the EPA and FEMA regarding the formaldehyde issue, he said that he was not aware that his staff was asked to engage in the much more formal analysis that resulted in the written health consultation sent to FEMA on February 1, 2007. Dr. De Rosa said he did not become aware of this formal written health consultation until after it was completed, reviewed, approved for dissemination by Dr. Frumkin and Dr. Sinks and sent to FEMA.<sup>69</sup>

In fact, the letter from Rick Preston to Scott Wright requested that the report be kept secret. “Please keep this information and your analysis confidential,” Preston wrote. “No information should be released to any third party without my express permission.”<sup>70</sup> Although Wright and Little did not share this information with Dr. De Rosa or other individuals within their supervisory chain within the Division of Toxicology, they did share it with officials in ATSDR’s Office of the Director, including Drs. Frumkin and Sinks.<sup>71</sup>

Little and Wright completed their draft health consultation for FEMA on Dec. 21, 2006. But, because most staff were preparing for the Christmas and New Year’s holidays they waited until after the New Year to provide their draft report to Mike Allred, their liaison in OTPER. Allred had been their direct supervisor in the DTEM Emergency Response unit before moving to OTPER. The relationship between the two offices was also close. The OTPER paid for one of the full time employees in the DTEM Emergency Response unit, and they were physically located down the hall from each other.

Since Hurricane Katrina, DTEM’s Emergency Response unit had been working under a streamlined process to produce emergency related health consultations on an expedited basis.<sup>72</sup> According to Little and Wright, they normally dealt directly with OTPER in this expedited process, established by Dr. Frumkin, and they did not submit their consultations up-the-chain through DTEM because of the time constraints associated with getting these emergency health consultations completed. They said they had previously done this in compiling other Hurricane Katrina-related health consultations on the Murphy Oil Spill in November<sup>73</sup> and December 2005<sup>74</sup>, for instance. They utilized this same expedited process to produce and review the formaldehyde health consultation.

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<sup>68</sup> Letter dated November 30, 2006 from Patrick (“Rick”) Edward Preston, Trial Attorney, Office of Chief Counsel, Federal Emergency Management Agency to Scott Wright, ATSDR. The letter and enclosed disk was not received by Mr. Wright until early December.

<sup>69</sup> “Toxic Trailers,” Unedited Hearing Transcript, p. 62.

<sup>70</sup> November 30, 2006, Letter from Patrick Preston to Scott Wright, *supra*.

<sup>71</sup> “Toxic Trailers,” Unedited Hearing Transcript, *supra*, p. 62.

<sup>72</sup> Subcommittee staff interviews with Scott Wright and Joe Little, ATSDR/CDC in Atlanta, Georgia, Feb. 12, 2008 and Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

<sup>73</sup> “Health Consultation: Murphy Oil Spill, 2500 East St. Bernard Highway, Meraux, St. Bernard Parish, Louisiana, Record of Activity,” November 8, 2005, U.S. Department of Health and Human Services Agency for Toxic Substances and Disease Registry.

[http://emergency.cdc.gov/disasters/hurricanes/katrina/murphyoil/pdf/murphy\\_oil\\_spill\\_110805.pdf](http://emergency.cdc.gov/disasters/hurricanes/katrina/murphyoil/pdf/murphy_oil_spill_110805.pdf)

<sup>74</sup> “Health Consultation: Murphy Oil Spill, 2500 East St. Bernard Highway, Meraux, St. Bernard Parish, Louisiana, December 9, 2005,” U.S. Department of Health and Human Services, Agency for Toxic

On Monday, January 8, 2007, Mike Allred, deputy director of OTPER, presented the “draft” health consultation on formaldehyde at Director Frumkin’s weekly “Issues Management Meeting.” These meetings were attended by senior staff in the Office of the Director, not by ATSDR Division Directors, such as Dr. De Rosa, or any of their staff. Dr. Frumkin told Allred that he wanted an executive summary and some conclusions in the health consultation.<sup>75</sup> Dr. Frumkin does not recall if he did or did not review the draft report.<sup>76</sup> Dr. Sinks recalls seeing and editing the document at least once, although Wright and Little say the document went through four revisions within the Director’s office.<sup>77</sup> Mike Allred physically carried the document from Little and Wright to Dr. Sinks for edits. Dr. Sinks does not recall making any significant changes to the document.<sup>78</sup> There is no evidence of anyone in the senior leadership of the Office of the Director raising any questions about the “level of concern” used in the report (0.3 ppm) or the lack of information regarding the potential risks from long term exposure to formaldehyde.

On February 1, 2007, the health consultation was completed and the transmittal letter was addressed to “Patrick Edward Preston, Trial Attorney, Office of Chief Counsel, Federal Emergency Management Agency.”<sup>79</sup> The transmittal letter was signed by Mike Allred for Dr. Mark Keim, the acting associate director of OTPER who was traveling at the time. The letter concluded: “In summary, the opening of windows and vents was effective in reducing formaldehyde concentrations below levels of health concern,” set at 0.3 ppm. The letter also noted: “Per your request, the data and the subsequent analysis of the data has not been shared with anyone other than Scott V. Wright and Joseph D. Little.” The letter continued: “FEMA has not requested ATSDR to evaluate longer term formaldehyde concentrations in trailers or health concerns related to potential exposures.” In an interview with Subcommittee staff, however, Rick Preston said he never directed Wright or Little *not* to look at long term health effects and denies trying to influence or limit their analysis in any other way. “I expected them to do the most thorough report they could,” said Preston.<sup>80</sup> Wright and Little said they were never specifically asked to look at long-term health effects, so they didn’t.

The February 1 transmittal letter also warned FEMA that “the consultation is not intended to establish FEMA’s future policy concerning temporary housing units.”<sup>81</sup> Yet,

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Substances and Disease Registry.

[http://emergency.cdc.gov/disasters/hurricanes/katrina/murphyoil/pdf/murphy\\_oil\\_120905.pdf](http://emergency.cdc.gov/disasters/hurricanes/katrina/murphyoil/pdf/murphy_oil_120905.pdf)

<sup>75</sup> E-mail dated January 8, 2007 from Phillip (“Mike”) Allred to Joseph Little and Scott Wright, “formaldehyde consult.”

<sup>76</sup> Subcommittee staff interview with Dr. Howard Frumkin, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., February 26, 2008.

<sup>77</sup> Subcommittee staff interviews with Scott Wright and Joe Little, ATSDR/CDC in Atlanta, Georgia, Feb. 12, 2008 and Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

<sup>78</sup> “Toxic Trailers,” Unedited Hearing Transcript, *supra*, p. 108.

<sup>79</sup> ATSDR Formaldehyde Health Consultation Transmittal Letter to FEMA, February 1, 2007.

<http://www.cdc.gov/nceh/ehhe/trailerstudy/pdfs/HC-TransmittalLtr-2-1-2007.pdf>

<sup>80</sup> Subcommittee staff interview with Rick Preston, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., February 27, 2008.

<sup>81</sup> February 1, 2007, ATSDR Consultation Transmittal Letter, *supra*.

that caveat was not followed at FEMA, and ATSDR made no objection to the consultation's wider use. On Monday, February 12, 2007, Martin McNeese, an Emergency Management Program Specialist in FEMA's Region VIII sent an e-mail to FEMA attorney Rick Preston about the ATSDR health consultation. "Thanks Rick," wrote McNeese, "I think that the report gave us what we were looking for. Changing air via external venting is effective in reducing the formaldehyde levels."<sup>82</sup> A month later, Robert Ferguson, a FEMA Mobile Homes Operations (MHOPS) Maintenance Coordinator, sent an e-mail to "MHOPS Field Staff" that said: "While there are no industry standards for formaldehyde levels [for indoor air quality], FEMA will use the ATSDR level of concern [0.3 ppm] as a guide in our housing program."<sup>83</sup> The ATSDR health consultation was utilized by FEMA to maintain the status quo and keep tens of thousands of families in trailers without immediately looking for alternative housing arrangements.

#### A. "Level of Concern"

In the February 2007 health consultation, Joe Little and Scott Wright included a "level of concern" they say was based upon a health "effects level" seen in the "documented, peer reviewed, scientific literature."<sup>84</sup> Yet, they say the "level of concern" was meant to be applied only to the 96 test trailers and was not intended to be used as a "health guidance value" that should be applied to all FEMA trailers. The "level of concern" was a label invented by them for the report that was essentially useless. Even Dr. Frumkin later pointed out that the "level of concern" had "little or no operational meaning."<sup>85</sup>

Both Little and Wright argued in Subcommittee interviews that the "level of concern" they used in the health consultation was appropriate because ATSDR MRLs were not realistic. In fact, Wright told Subcommittee staff that they used 0.3 ppm as the "level of concern" because they were looking at adverse health effects not, what he described as, "nuisance" effects, which he implied were symptoms such as watery eyes and throat irritation.<sup>86</sup> In a "for the file" memorandum written by Joe Little, regarding how he came to chose 0.3 ppm as the "level of concern," he wrote that his decision "was based on the fact that it was the lowest actual human effect level found in the peer reviewed literature from ATSDR and the National Library of Medicine."<sup>87</sup> But a search of Medline Plus,<sup>88</sup> the primary search tool at the National Library of Medicine, reveals publications by the

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<sup>82</sup> E-mail dated February 12, 2007 from Martin McNeese to Patrick Preston, "RE: CDC Analysis of EPA Formaldehyde Testing."

<sup>83</sup> E-mail dated March 22, 2007 from Robert Ferguson, FEMA Mobile Homes Operations (MHOPS) Maintenance Coordinator, to MHOPS Field Staff, "Revised Formaldehyde Guide line."

<sup>84</sup> E-mail dated July 20, 2007, 11:06 a.m. from Scott Wright to Sascha Fielding, cc'd to Joseph Little and Ed Murray, "Subject: RE: IMPORTANT FEMA trailer hearing re ATSDR."

<sup>85</sup> E-mail dated July 20, 2007, 11:18 a.m. from Howard Frumkin to Sascha Fielding, Mike McGeehin, William Cibulas and Henry Falk, "Subject: Re: IMPORTANT FEMA trailer hearing re ATSDR."

<sup>86</sup> Subcommittee staff interview with Scott Wright, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

<sup>87</sup> Joseph Little, "For the file. Response to Congressman Waxman's letter dated August 24, 2007," August 30, 2007.

<sup>88</sup> Medline Plus. <http://www.nlm.nih.gov/medlineplus/>.

Environmental Protection Agency,<sup>89</sup> National Cancer Institute,<sup>90</sup> and Occupational Safety and Health Administration,<sup>91</sup> which all cite 0.1 ppm as the level at which exposure to formaldehyde may cause potential health effects, including irritation of the eye, nose, and throat; wheezing and coughing; fatigue; skin rash; and severe allergic reactions.

Instead of relying upon these recommendations and ATSDR's own minimal risk levels (MRLs) described above, Little used the narrowly-defined 0.3 ppm level of concern, that he wrote in his file was taken directly from the ATSDR Medical Management Guideline for Formaldehyde.<sup>92</sup> That document says: "Previously sensitized individuals can develop severe narrowing of the bronchi at very low concentration (e.g., 0.3 ppm). Bronchial narrowing may begin immediately or can be delayed for 3 to 4 hours; effects may worsen for up to 20 hours after exposure and can persist for several days." Little also said he relied on ATSDR's 1999 Toxicological Profile on Formaldehyde to base his decision. But in light of significant and compelling evidence arguing for a more stringent standard, the "level of concern" chosen in the health consultation seems indefensible.

Dr. Vincent Garry, a medical doctor, pathologist and former Director of Environmental Medicine at the University of Minnesota was a peer reviewer of ATSDR's 1999 Toxicological Profile on Formaldehyde. At the request of Subcommittee staff Dr. Garry offered his own critique of the 0.3 ppm "level of concern" chosen in the February 2007 health consultation. In a letter to Chairman Miller dated March 24, 2008, Dr. Garry wrote of the choice: "They leave no margin of safety for long term effects nor do they take into account that unlike occupational exposures this is a 24 hr per day 7 days per week exposure for children and the old who are sensitive to the chemical for different reasons. For example, children under age 2 have a short trachea and breathe faster than adults (30-40 breaths per minute), therefore, process more formaldehyde into the body and are probably less efficient in the metabolism of the chemical. For these reasons the chemical is more toxic in young children." "Finally," Garry wrote, "the medical advisory guidance provided was designed for emergency response in an occupational or formaldehyde spill incident exposure." Dr. Garry concluded: "Lack of communication and peer review contributed to this inappropriate ATSDR response."<sup>93</sup>

That inappropriate response and the agency's failure to effectively correct it for so long, led FEMA to endanger the public's health and safety. Rick Preston, FEMA's lawyer, did not believe the health consultation pointed out any health dangers regarding the levels of formaldehyde in the FEMA trailers. On February 27 Preston wrote to Margaret Ramos

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<sup>89</sup> "Formaldehyde – Basic Information – Indoor Air Quality (IAQ)," Environmental Protection Agency. <http://www.epa.gov/iaq/formalde.html>.

<sup>90</sup> "Formaldehyde and Cancer: Questions and Answers – Fact Sheet," National Cancer Institute. <http://www.cancer.gov/cancertopics/factsheet/Risk/formaldehyde>.

<sup>91</sup> "OSHA Formaldehyde Fact Sheet," Occupational Safety and Health Administration, Department of Labor, 2002. [http://www.osha.gov/OshDoc/data\\_General\\_Facts/formaldehyde-factsheet.pdf](http://www.osha.gov/OshDoc/data_General_Facts/formaldehyde-factsheet.pdf)

<sup>92</sup> "Medical Management Guidelines for Formaldehyde," Agency for Toxic Substances and Disease Registry. <http://www.atsdr.cdc.gov/mhmi/mmg111.html>

<sup>93</sup> Dr. Vincent F. Garry letter to I&O Subcommittee Chairman Brad Miller, March 24, 2008.

in FEMA's Office of Chief Counsel, noting that "FEMA [had] not identified any independent evidence of dangerous formaldehyde conditions in trailers."<sup>94</sup>

## B. Dr. De Rosa Raises Red Flags

On that same day, however, Dr. De Rosa saw the health consultation for the first time when someone placed a copy of it on his desk. He glanced through it quickly and instantly flagged a number of serious concerns with the report. It did not address potential long-term health effects of exposures to elevated levels of formaldehyde, including the risk of cancer, it neglected to mention that formaldehyde is "reasonably anticipated to be a human carcinogen"<sup>95</sup> by the Department of Health and Human Services, and it had not gone through a senior technical review. Dr. De Rosa was particularly troubled by the fact that he was unaware of the report's existence and had not been included in any discussions, reviews or assessments of the report before it was finalized. Dr. De Rosa telephoned Dr. Sinks to alert him to the problems he identified and to let him know that the report had been sent to FEMA without his review.<sup>96</sup>

Dr. De Rosa called Scott Wright and Joe Little into his office to discuss the health consultation, his concerns, and questioned why he was not aware that it was being prepared. He followed up that same day with an e-mail to Dr. Sinks and Dr. Frumkin, in which he included a draft letter he had written to Rick Preston pointing out the significant flaws and omissions in the February 1 health consultation on formaldehyde. "Howie and Tom," Dr. De Rosa wrote, "This is the issue that I discussed w/you Tom this afternoon. The letter captures some of my concerns on this consult which I saw for the first time today. In my discussions w/staff, regarding why I was not in the loop, I was informed that they were working on this under the directions of your office. I now have a clearer picture of this and have reaffirmed our SOP's [standard operating procedures] that have been in place for many years. I regret this breakdown and have addressed this issue w/our staff. I have no intention of pursuing this any further until I have direction from your office."<sup>97</sup>

Despite the fact that Dr. De Rosa *had not* seen the health consultation before it was released, and both Dr. Frumkin and Dr. Sinks *had* seen the report before it was released and raised no concerns about it, they both blame Dr. De Rosa for the report's failings. Perhaps Dr. De Rosa should have been aware of the report before it was released, but he was not. Once he did become aware of it, however, he immediately pointed out some of its many flaws and quickly took action to attempt to address the problems he identified.<sup>98</sup> But, the

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<sup>94</sup> E-mail dated February 27, 2007 from Patrick Preston to Margaret Ramos.

<sup>95</sup> Report on Carcinogens, Eleventh Edition; U.S. Department of Health and Human Services, Public Health Service, National Toxicology Program, 2005. <http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s089form.pdf>

<sup>96</sup> "Toxic Trailers," Unedited Hearing Transcript, *supra*, p. 96.

<sup>97</sup> E-mail dated February 27, 2007 from Christopher De Rosa to Howard Frumkin and Tom Sinks, "Draft Letter."

<sup>98</sup> Dr. De Rosa did not raise questions at that time about the 0.3 level of concern, although he raised it in a conversation with Scott Wright and Joe Little. In his correspondence with Dr. Frumkin and Dr. Sinks, Dr. De Rosa's focus was on the lack of information regarding potential health effects from long term exposure to formaldehyde.

formaldehyde issue did not garner the attention it deserved from either Dr. Frumkin or Dr. Sinks.

Nine days after Dr. De Rosa forwarded his e-mail and a draft letter to FEMA to Dr. Frumkin and Dr. Sinks, neither of them had yet responded to his suggestion that they send a letter to FEMA attorney Rick Preston amending the February health consultation and making FEMA aware of the significant flaws and omissions in the document. Dr. De Rosa sent a second e-mail to Dr. Frumkin and Dr. Sinks on Thursday, March 8, 2007, telling them that he planned to send his draft letter to FEMA if he received no objections from them by the close of business the next day.<sup>99</sup> On Friday, March 9, Dr. Frumkin responded to Dr. De Rosa and said that he agreed with his concerns, but wanted the response to FEMA coming from the same ATSDR office that originated the initial health consultation.<sup>100</sup> At this juncture Dr. Frumkin seemed to be claiming ownership of the report because OTPER was in his office. Later, however, both he and Dr. Sinks would blame Dr. De Rosa's Division of Toxicology for the failures in the report and not keeping them apprised of the role of FEMA's Office of General Counsel.

On March 17, 2007, at the direction of Dr. Frumkin, Dr. De Rosa's draft letter to FEMA was sent to FEMA trial attorney Rick Preston virtually unchanged. It was signed by Dr. Mark Keim, Associate Director of the Office of Terrorism Preparedness and Emergency Response (OTPER).<sup>101</sup> In essence, the March 17 letter recanted the original health consultation. It said the consultation was "completed without a policy review by our senior technical staff" and warned "I am concerned that this health consultation is incomplete and perhaps misleading." It also said that formaldehyde is classified as "reasonably anticipated to be a human carcinogen" and as a result there is "no recognized 'safe level' of exposure. Thus, any level of exposure to formaldehyde may pose a cancer risk, regardless of duration." "Failure to communicate this issue is possibly misleading, and a threat to public health," the letter concluded.<sup>102</sup>

At FEMA, Rick Preston had widely shared the February 2007 health consultation, which found that levels of formaldehyde were not dangerous in properly ventilated trailers. But remarkably, he filed away the March 17 letter, which repudiated the February report, articulating many of its scientific flaws and omissions. "I put the March letter in my file and did not share it with anyone," Preston told Subcommittee staff. "Everything in that letter was already known to FEMA," he argued. "I believe the agency already understood the issues with formaldehyde." Preston also claimed that ongoing formaldehyde litigation played no role in his actions. "At no point did litigation interfere with this in any way."<sup>103</sup>

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<sup>99</sup> E-mail dated March 8, 2007 from Christopher De Rosa to Howard Frumkin and Tom Sinks, "Draft Letter to FEMA."

<sup>100</sup> E-mail dated March 9, 2007 from Howard Frumkin to Christopher De Rosa and Tom Sinks, "Draft Letter to FEMA."

<sup>101</sup> ATSDR Formaldehyde Health Consultation Follow-Up Letter to FEMA, March 17, 2007.

<http://www.cdc.gov/nceh/ehhe/trailerstudy/pdfs/HC-AmendmentLtr-3-17-07.pdf>

<sup>102</sup> Ibid.

<sup>103</sup> Subcommittee staff interview with Rick Preston, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., February 27, 2008.

Preston told Subcommittee staff that he lost interest in the issue because he was leaving FEMA and moving to New Mexico the following month and because FEMA had been dropped from the formaldehyde class action suit.<sup>104</sup> Internal FEMA documents, however, show that litigation certainly played a large role in FEMA's overall actions. What role they specifically played in Rick Preston's decision to *not* share the March 17 letter is uncertain. But Rick Preston's *actions* and ATSDR's *inactions* on this issue ensured that the potential health threat from formaldehyde in FEMA trailers would not be thoroughly, accurately or quickly addressed.

Apart from sending the March 17 letter drafted by Dr. De Rosa, the director of ATSDR and his deputy took no other immediate actions to either ensure that FEMA realized the flaws in the report or to actively inform or warn the public about the potential threat of formaldehyde exposure while living in FEMA-provided trailers. Only in July 2007, in the wake of mounting public and Congressional pressure, Drs. Frumkin and Sinks finally decided to prepare a revised health consultation, which was released in October 2007, eight months after Dr. De Rosa first brought its flaws to their attention. In short, the leaders of ATSDR failed to lead and as a result they failed to protect the public's health.

Why didn't officials at ATSDR take immediate steps to follow-up on the March letter sent to FEMA? Dr. De Rosa says: "It was clear to me from that point it was being handled by OTPER, and they didn't want me involved." Dr. Frumkin and Dr. Sinks blame both FEMA and Dr. De Rosa. "My expectation was that FEMA would take appropriate efforts," said Dr. Frumkin.<sup>105</sup> Dr. Sinks was a bit more candid. "This really wasn't a priority," he said.<sup>106</sup> Both Dr. Frumkin and Dr. Sinks said there was nothing stopping Dr. De Rosa from taking the initiative to follow up further if he wanted. They both implied that it was Dr. De Rosa's responsibility, not theirs to follow-up on the formaldehyde issue and take any additional corrective actions as he saw fit.

Dr. Sinks attempted to distance himself from the formaldehyde controversy altogether, telling Subcommittee staff: "I was not fully engaged in this issue." However, at the same time, Dr. Sinks acknowledged how unusual it was for him and Dr. Frumkin to have been involved with this health consultation at any level. "In general, the Office of the Director does not see health consultations," said Sinks.<sup>107</sup> In fact, Joe Little said of the consultation: "This was the first report I worked on in 17 years that ever went to the Director's Office, and it went to them because it was politically sensitive and it was being worked on by [FEMA's] Office of General Counsel."<sup>108</sup> Don Benken said he briefed Dr.

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<sup>104</sup> Rick Preston left his employment at FEMA Headquarters in Washington, D.C. and moved to New Mexico in April 2007. He continued to work for FEMA on the formaldehyde issue, however, from New Mexico until October 2007. The United States Government was dropped from the Hillard class action suit on February 28, 2007. See: Hillard vs. United States Government, Civil Action 06-2576, U.S. District Court, Eastern District of Louisiana; Case 2:06-cv-02576-KDE-KWR, Document 138, Filed February 28, 2007.

<sup>105</sup> Subcommittee staff interview with Dr. Howard Frumkin, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., February 26, 2008.

<sup>106</sup> Subcommittee staff interview with Dr. Tom Sinks, ATSDR/CDC, Atlanta, Georgia, February 13, 2008.

<sup>107</sup> Subcommittee staff interview with Dr. Tom Sinks, ATSDR/CDC, Atlanta, Georgia, February 13, 2008.

<sup>108</sup> Subcommittee staff interview with Joseph Little, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

Sinks on this issue exactly because of those two pivotal facts.<sup>109</sup> “It went up to Frumkin and Sinks because of the litigation and health policy concerns,” agreed Mike Allred.<sup>110</sup>

### C. Collision Course

Remarkably, however, in both interviews with Subcommittee staff and during congressional testimony both Drs. Frumkin and Sinks said they were not aware of the role played by FEMA’s Office of General Counsel in the formaldehyde health consultation until July 2007, when congressional investigators highlighted this fact. “It was simply something that did not catch my attention at the time,” testified Dr. Sinks.<sup>111</sup> Yet both Drs. Frumkin and Sinks received several e-mails that illustrated this fact and it was clearly noted in the very first sentence of the draft February 2007 health consultation which they both acknowledge they reviewed. Despite that, they both made a tremendous issue out of the role played by FEMA’s Office of General Counsel in their multiple attempts to scorn subordinates for *not* realizing the significance of this fact.

It seems, however, their subordinates *were* aware of the critical importance of that fact even if ATSDR’s leadership was not. Both the role of FEMA’s Office of General Counsel and the potential public health implications of the formaldehyde issue were, in fact, the key factors that drove this issue up the ATSDR chain and into the Office of the Director, according to Joe Little, Scott Wright, Don Benken and Mike Allred. But once it landed in the Office of the Director of ATSDR it never received the attention it deserved. It is hard to decipher why exactly that happened, but rather than acknowledging their own flaws and failures in appropriately handling and addressing the formaldehyde issue, Dr. Frumkin and Dr. Sinks have repeatedly attempted to push the blame for the agency’s failures on this issue to Chris De Rosa and his staff. In fact, Dr. De Rosa appeared to be on a collision course with the agency’s leadership beginning in early 2007, during which he and ATSDR’s management engaged in repeated quarrels over several public health issues.

In February 2007, for instance, just as the formaldehyde issue was coming to a head with the release of the flawed ATSDR health consultation to FEMA, Dr. De Rosa raised another issue with ATSDR management revolving around a potential health issue with 1,4-Dioxane, a chemical byproduct in cosmetics and baby shampoo. In addition, a report of health conditions and environmental pollution in the Great Lakes Basin that De Rosa’s division had been working on since 2002, which had gone through an external peer review, been cleared by Director Frumkin’s Office for Science, and was ready for public release in July 2007, was abruptly cancelled at the last minute. Dr. Frumkin and Dr. Sinks claimed the report was scientifically flawed and that they were unaware of its existence until the last minute. Dr. Sinks oversaw the re-writing of a new report which was sent to the Institute of Medicine in April 2008 along with Dr. De Rosa’s original draft for their assessment.<sup>112</sup>

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<sup>109</sup> Subcommittee staff phone interview with Don Benken, February 25, 2008.

<sup>110</sup> Subcommittee staff phone interview with Phillip M. (“Mike”) Allred, February 18, 2008.

<sup>111</sup> “Toxic Trailers,” Unedited I&O Subcommittee Hearing Transcript, *supra*, p. 114.

<sup>112</sup> “Review of ATSDR’s Great Lakes Reports,” Board on Population Health and Public Health Practice, Institute of Medicine, National Academy of Sciences, available: <http://www.iom.edu/CMS/3793/53817.aspx>. See also, ATSDR’s Great Lakes section of its web-site here: <http://www.atsdr.cdc.gov/grtlakes>. The Institute of Medicine (IOM) released its assessment on September 5, 2008. The 11-person IOM panel that reviewed

The leadership of ATSDR has used the formaldehyde, 1,4-dioxane, and Great Lakes issues to allege that Dr. De Rosa failed to grasp important scientific issues, failed to effectively manage the production of agency documents, mis-communicated scientific facts, failed to serve as a role model, and failed to apply science to public health.<sup>113</sup> In fact, Dr. De Rosa seems to have been virtually alone at ATSDR in attempting to utilize scientific findings to protect the public's health. The director of ATSDR and his deputy's response to the unfolding formaldehyde fiasco was plagued by incompetence, apathy and indifference. In addition, their recollection of events prior to Congressman Waxman's hearing on this issue in July 2007 was astoundingly weak.<sup>114</sup>

In May 2007, Dr. Sinks does recall that the CDC did become engaged with the Department of Homeland Security (DHS) about conducting a long-term health study on FEMA-trailer inhabitants, particularly children, to examine the potential impact from exposure to formaldehyde. But more than one year later the protocols for that planned study have still not been finalized and those CDC-DHS interactions did not address either the flaws in the February 2007 health consultation, or how that document was being misused by FEMA officials. On May 15, 2007, FEMA Administrator David Paulison testified before the House Homeland Security Committee about FEMA's hurricane response preparedness and said, referring to the ATSDR health consultation: "We've been told that the formaldehyde does not present a health hazard."<sup>115</sup> Paulison's congressional testimony was covered by the press and he repeated these assertions to the media, but both Dr. Frumkin and Dr. Sinks say they were unaware of his comments at the time.<sup>116</sup>

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the reports said they "concurred with the major scientific concerns expressed by the Office of the Director of ATSDR" regarding the 2007 report overseen by Dr. De Rosa, but they also concluded that "important limitations remain" in the 2008 version which was overseen by Dr. Sinks as well. On the same day the report was released Dr. Sinks sent an agency wide e-mail to all employees at NCEH and ATSDR. The e-mail noted that the IOM panel agreed with most of ATSDR's concerns about the 2007 report, but it did not include the full scope of the IOM's criticisms of Dr. Sinks' own 2008 version of the report.

<sup>113</sup> Confidential Memorandum from Dr. Howard Frumkin, Director, National Center for Environmental Health/Agency for Toxic Substances and Disease Registry (NCEH/ATSDR) to CDC Compensation and Performance Review Subcommittee (CPRS) through Dr. Henry Falk, Director, Coordinating Center for Environmental Health and Injury Prevention (CCEHIP), CDC, Subject: "Rating Official's Summary Review – Christopher T. De Rosa, Ph.D., Director, Division of Toxicology and Environmental Medicine, ATSDR, Oct. 24, 2007. Hereafter: "Frumkin Memo to Falk."

<sup>114</sup> Hearing on FEMA's Toxic Trailers, Committee on Oversight and Government Reform, U.S. House of Representatives, Washington, D.C., July 19, 2007.

<http://oversight.house.gov/documents/20071114164004.pdf>.

<sup>115</sup> Transcript, Hearing on Hurricane Season Preparedness, House Committee on Homeland Security, May 15, 2007.

<sup>116</sup> CBS News ran three stories on the FEMA/formaldehyde subject on May 16<sup>th</sup>, May 17<sup>th</sup> and May 18<sup>th</sup>, 2007. The Gannett News Service, which is distributed to dozens of newspapers nationwide, ran a story on May 16, 2007, focused on the fact that Administrator Paulison said he was unaware the trailers posed any health threat to the public, "FEMA chief dismisses complaints of formaldehyde in trailers," Gannett News Service, Ana Radelat, May 16, 2007. The Louisiana based paper, The Times-Picayune ran a similar story, "Test trailers for chemical, FEMA told; Formaldehyde levels concern lawmakers," Bill Walsh, Times-Picayune, May 19, 2007. In addition, within days of the May 15<sup>th</sup> hearing Congressman Henry Waxman, Chairman of the House Oversight and Government Reform Committee wrote a letter to FEMA Administrator Paulison requesting documents related to the high levels of formaldehyde in the trailers and Congressman Bobby Jindal and Senator Mary Landrieu both called for congressional hearings on the matter. Yet,

"We were not adequately aware of the way the assessment was being used or interpreted or misinterpreted during that several month period in early 2007," Dr. Frumkin told the I&O Subcommittee during a hearing on the issue in April 2008. "We focused on it much more intensively during the middle of 2007 when the media reports and the Congressional oversight drew our attention to it." Yet, documents provided to the Subcommittee by ATSDR demonstrate that the FEMA formaldehyde issue was high on the agenda of Dr. Frumkin's Issues Management Meetings much earlier. It was discussed on average every other week between January 2007 and July 2007. The topic was addressed at least thirteen times at these meetings from January 8, 2007 through July 16, 2007.<sup>117</sup> Dr. Sinks personally addressed the issue twice in June 2007. Congressman Waxman held a hearing on the FEMA-formaldehyde issue on July 19, 2007, which Dr. Frumkin and Dr. Sinks claim served as a sort of lightning rod that drove their attention to this issue.

Dr. Frumkin and Dr. Sinks also claimed they were unaware of the media reports about health concerns regarding formaldehyde in the trailers until the summer of 2007. Yet, on February 12, 2007, the formaldehyde issue was raised at Dr. Frumkin's Issues Management Meeting when a major story in *The Nation* called "Dying for a Home" was discussed, according to the agendas of these meetings.<sup>118</sup> In an e-mail on March 13, 2007, with the subject heading: "Heads up on Media Request (FEMA Trailers)," Dr. Frumkin wrote: "It will be important in any public statements to refer both to acute and to chronic health concerns. Our original communication apparently didn't do that," he wrote.<sup>119</sup> On May 21, 2007, a CBS News story that had aired the previous week on the formaldehyde trailer issue was also discussed at Director Frumkin's weekly staff meeting.<sup>120</sup> Both Dr. Frumkin and Dr. Sinks told Subcommittee staff they were unaware of the CBS News story or similar media reports at the time that focused on the *actual* respiratory symptoms that Gulf Coast hurricane survivors were exhibiting that was thought to be tied to high levels of formaldehyde in FEMA provided trailers and mobile homes. On May 30, 2007, Dr. Frumkin was also e-mailed a news story with the title: "Formaldehyde & Kids: Sleep

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ATSDR's leadership says that at the time they were unaware of any of the media coverage or congressional interest in the FEMA/formaldehyde issue.

<sup>117</sup> Dr. Frumkin claims he was not focused on the formaldehyde issue until after Congressman Waxman held a hearing on the issue on July 19, 2007. Yet, according to the "agendas" from Dr. Frumkin's own weekly Issues Management Meetings, the FEMA/formaldehyde issue was discussed at least 13 times in Dr. Frumkin's weekly staff meetings before Congressman Waxman's hearing on the following dates: Jan. 8, 2007; Feb. 12, 2007; Feb. 20, 2007; March 5, 2007; March 26, 2007; April 2, 2007; May 21, 2007; May 29, 2007; June 4, 2007; June 25, 2007; July 2, 2007; July 9, 2007; and July 16, 2007.

<sup>118</sup> Amanda Spake, "Dying for a Home," *The Nation*, February 26, 2007 edition (posted on-line February 14, 2007). <http://www.thenation.com/doc/20070226/spake>

<sup>119</sup> E-mail dated March 13, 2007 from Howard Frumkin to Tom Sinks, Henry Falk, Mark Keim, Bernadette Burden, Chris De Rosa and Kenneth Rose, "Subject: Re: Heads up on Media Request (FEMA Trailers)."

<sup>120</sup> E-mail dated May 21, 2007, 9:50 a.m., from Stanley Meiburg (CDC/CCEHIP/NCEH), Subject: "CBS News Report on FEMA trailers and formaldehyde concerns (follow up)." The e-mail attached a string of other e-mails and says: "FYI per discussion this morning at Issues Management." Dr. Frumkin was copied on a string of e-mails with the subject heading "CBS News report on FEMA trailers & formaldehyde concerns (follow up)" at 11:40 a.m. on May 21, 2007 from Jana Telfer in the Office of Communications. The CBS News story was titled: "Are FEMA Trailers Making Residents Sick?," *CBS Evening News*, May 16, 2007, and is available here: [http://www.cbsnews.com/stories/2007/05/16/cbsnews\\_investigates/main2819179.shtml](http://www.cbsnews.com/stories/2007/05/16/cbsnews_investigates/main2819179.shtml)

Well.”<sup>121</sup> Dr. Frumkin noticed enough to forward the e-mail to Dr. Sinks, Dr. De Rosa and others at ATSDR. But the agency took no steps to rectify the failures contained in its original formaldehyde health consultation, to correct FEMA’s misstatements, to warn trailer inhabitants about the true risks they faced from potential exposure to elevated levels of formaldehyde or to issue a new health consultation until October 2007.<sup>122</sup>

## VII. A Failure to Manage or Lead

Dr. Frumkin and Dr. Sinks both failed to identify any of the scientific flaws or omissions in the original health consultation identified by Dr. De Rosa. Although Dr. Frumkin agreed with Dr. De Rosa’s critique of the February health consultation outlined in the letter sent to FEMA on March 17, 2007, the public health warnings detailed in that letter, were miraculously forgotten, intentionally ignored or dismissed by ATSDR and CDC officials in its wake. There were multiple occasions after that letter was sent to FEMA, where official ATSDR and CDC publications and correspondence, some sent to Dr. Frumkin for review and approval, clearly failed to mention these warnings.

- On Monday, May 21, 2007, Dr. Frumkin was e-mailed a link to the ATSDR health consultation which was posted on the FEMA web-site on May 4, 2007 and a link to the FEMA press release.<sup>123</sup> Dr. Frumkin, who approved the March 17, 2007 letter to FEMA which said “failure to communicate” many of the omissions in the February health consultation, is “possibly misleading, and a threat to public health,” did nothing to ensure that FEMA properly understood and publicly corrected the ATSDR health consultation.<sup>124</sup>
- On July 25, 2007, Dr. Frumkin was e-mailed about a CDC Health Advisory Notice (HAN) regarding formaldehyde that was being finalized for distribution to physicians and other health care providers treating Gulf Coast residents. This notice included information about the potential effects of short-term exposure to formaldehyde, including irritation of the eyes, nose and throat and mentioned some of the “at risk” populations, including asthma patients and those with respiratory illnesses.<sup>125</sup> It did not, however, mention other especially vulnerable populations, including children and the elderly, and it failed to mention that formaldehyde is a probable or known carcinogen or the potential long-term consequences of exposure,

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<sup>121</sup> E-mail dated May 20, 2007 from Bill Ravanese, Boston Regional Director, Health Care Without Harm to Howard Frumkin, “Subject: Formaldehyde & Kids,” May 30, 2007. The e-mail included a story titled: “Formaldehyde & Kids: Sleep Well,” by Bill Walsh, National Coordinator, Healthy Building Network.

<sup>122</sup> “An Update and Revision of ATSDR’s February 2007 Health Consultation: Formaldehyde Sampling of FEMA Temporary-Housing Trailers Baton Rouge, Louisiana, September-October, 2006,” October 2007, U.S. Department of Health and Human Services, Public Health Service, ATSDR, Atlanta, Georgia [http://www.atsdr.cdc.gov/substances/formaldehyde/pdfs/revised\\_formaldehyde\\_report\\_1007.pdf](http://www.atsdr.cdc.gov/substances/formaldehyde/pdfs/revised_formaldehyde_report_1007.pdf). (Hereafter: “ATSDR October 2007 Revised Health Consultation”).

<sup>123</sup> Email dated May 21, 2007 from Jane Telfer to William Cibulas et al., CCed to Howard Frumkin, “Details on FEMA releasing the February Health Consultation without long term health risks.”

<sup>124</sup> March 17, 2007, ATSDR Follow-Up Letter to FEMA, *supra*.

<sup>125</sup> Email dated July 25, 2007 from Dagny Olivares to Howard Frumkin, “HAN Feedback from the Emergency Communications System (ECS).”

including cancer. Dr. Frumkin took no actions to correct the omissions in the CDC's HAN release.

- On July 27, 2007, Dr. Frumkin received several e-mails about a draft press release intended to be included with the posting of the February 2007 health consultation on the ATSDR's own web-site. The press release mentioned that the formaldehyde levels in trailers tested by the EPA in the fall of 2006 and analyzed by ATSDR for the health consultation could cause adverse health effects.<sup>126</sup> Yet again, however, it failed to mention what the short-term or potential long-term effects were and it failed to mention that formaldehyde was considered a probable carcinogen.

In testimony to the I&O Subcommittee in April 2008, Dr. Frumkin said that in July 2007 he and his agency "made the decision to pull back the original [February 2007 formaldehyde health] consultation and reissue a more accurate document."<sup>127</sup> Inexcusably, while ATSDR may have made the decision in July to issue a "revised" health consultation Dr. Frumkin did not pull back the – by now – knowingly flawed February 2007 health consultation until the agency issued its revised consultation in October 2007.

Dr. Frumkin and other senior ATSDR officials did not seem to realize the significance of the fundamental flaws in the February 2007 health consultation or the potential impact on the residents forced to live in potentially formaldehyde-laden trailers for years. Although Dr. Frumkin and Dr. Sinks had a lackluster reaction to the flaws in the health consultation, others in ATSDR were deeply alarmed by the report's inaccuracies, conclusions and overall scientific integrity.

On August 8, 2007, an ATSDR industrial hygienist, Lynn Wilder, outlined her concerns about the consultation in an e-mail after seeing it for the first time. "Except for the first day [of EPA testing of the 96 unoccupied trailers], the conditions during air sampling are not reflective—they underestimate—of typical residential exposure," she wrote. "Indoor sampling to evaluate a health hazard is done with the home sealed as much as possible and a furnace turned on to represent worse case conditions." This was never done in the EPA tests, however. "Even with the doors and windows open," observed Wilder, "formaldehyde levels exceed: all three ATSDR MRLs [Minimal Risk Levels] ..." NIOSH, OSHA and other standards. "I am extremely concerned that we have compared the air sampling results with an occupational exposure level of 300 ppb [.3 ppm] (ACGIH) [American Conference of Industrial Hygienists] – residents are exposed for up to 24 hours/day and may reside in these homes for years," warned Wilder. "This exposure should not be compared to a 15-minute occupation value."

"I would be happy to assist in any possible follow-up that may be required," Wilder offered. Her e-mail was forwarded that same day to Dr. Tom Sinks and Dr. Frumkin's chief science officer, Dr. Mark Bashor. Although ATSDR was – at the time – just getting

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<sup>126</sup> Email dated July 27, 2007 from Sascha Fielding to Howard Frumkin, "FEMA Trailers – Language to post with link to report prepared by ATSDR for web site."

<sup>127</sup> "Toxic Trailers," Unedited I&O Subcommittee Hearing Transcript, supra, p. 132.

started on issuing a revised health consultation it seems strikingly apparent that the agency was moving at a snail's pace to address the public health hazards posed by elevated levels of formaldehyde in the travel trailers. In fact, it appeared as though Dr. Frumkin and ATSDR leadership was looking for virtually any excuse to relinquish their responsibilities to conduct a thorough, scientifically defensible investigation of the potential health hazards facing occupants of FEMA-provided travel trailers.

The day after Lynn Wilder wrote her alarming e-mail, Dr. Frumkin responded to an e-mail from the CDC's Dr. Henry Falk who suggested that "pressure will mount" on FEMA and CDC regarding the formaldehyde issue. Dr. Falk also asked if FEMA's then-recent decision to stop using trailers would affect the CDC's work in any way. "Henry, if FEMA is really pulling people out of trailers that will diminish the pressure for CDC to offer early conclusions," wrote Frumkin. "They are already taking action based on being cautious. In the meantime," wrote Frumkin, "our communications program—offering best available advice and keeping the public updated on study progress—should help address concerns." It seems that Dr. Frumkin never missed an opportunity to delay his agency's response to the formaldehyde issue. In the end, his actions and *inactions* put the public at unnecessary risk of exposure to toxic chemicals and kept the public in harm's way for at least one year longer than necessary.

Meanwhile, Dr. De Rosa pushed the agency to do more to alert the residents of the trailers, the public and Congress to the true risks of formaldehyde exposure. In March 2007, for instance, Dr. De Rosa wrote that CDC Director Dr. Julie Gerberding's response to a letter from Congressman Gene Taylor<sup>128</sup> requesting a CDC investigation into formaldehyde exposures in FEMA-provided trailers, should address the potential cancer risk of formaldehyde.<sup>129</sup> Dr. Gerberding's response to Congressman Taylor neglected to address the cancer issue.<sup>130</sup> In June 2007, Dr. De Rosa warned Dr. Frumkin, Dr. Sinks, and others in an e-mail that they needed to be very cautious using the word "safe" in reference to formaldehyde, as it was a known carcinogen, suggesting that established ATSDR minimal risk levels (MRLs) regarding exposure to formaldehyde be used instead.<sup>131</sup> In July 2007, Dr. De Rosa sent an e-mail addressed to "colleagues" at ATSDR, including Drs. Frumkin and Sinks and 15 other employees regarding FEMA's announcement that it intended to conduct formaldehyde testing in trailers. "Colleagues," wrote De Rosa, "While testing may be warranted, what immediate interventions are being pursued thru appropriate

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<sup>128</sup> Letter dated February 22, 2007 from Congressman Gene Taylor to Dr. Julie Gerberding, Director, Centers for Disease Control and Prevention. <http://www.house.gov/genetaylor/CDC-trailers-ltr.pdf>.

<sup>129</sup> On March 27, 2007, Chris De Rosa replied to an e-mail from Sascha Fielding in the CDC's Coordinating Center for Environmental Health and Injury Prevention (CCEHIP) regarding an appropriate response from Dr. Gerberding to Congressman Taylor. Dr. De Rosa said that the "cancer issue should be addressed in some fashion."

<sup>130</sup> Letter from Dr. Julie Gerberding, Director, Centers for Disease Control and Prevention and Administrator, Agency for Toxic Substances and Disease Registry to Congressman Gene Taylor, May 30, 2007.

<sup>131</sup> E-mail dated June 1, 2007 from Chris De Rosa to Howard Frumkin and Tom Sinks, "FW: Indoor air formaldehyde."

channels to interdict exposures? Or to mitigate health impacts? I am concerned that the reported clinical signs are the harbinger of a[n] impending public health disaster.”<sup>132</sup>

### A. Dr. De Rosa’s Draft Reprimand – July 2007

Dr. De Rosa appeared to be an unwelcome thorn in the side of ATSDR management. In July 2007, Dr. Sinks began drafting an official “reprimand” letter against Dr. De Rosa in regard to both the 1,4-Dioxane issue and the Great Lakes Report. The draft letter said, in part: “The following describes a pattern of conduct and performance inappropriate for a senior scientific manager within the agency. This pattern is characterized by inappropriate behavior and inadequate performance as a manager and a scientist. This situation is unexpected and will not be tolerated from a professional with your experience and level of authority. Elements of this behavior have occurred far too often and must stop.”<sup>133</sup> The first draft of this reprimand was written by Dr. Sinks and e-mailed to Dr. Frumkin on July 19, 2007.<sup>134</sup> On July 22, 2007, Dr. Frumkin e-mailed Dr. Sinks telling him that he “revised the de Rosa memorandum.”<sup>135</sup> On Friday, August 10<sup>th</sup> Dr. Sinks e-mailed Dr. Frumkin reminding him of the need to move forward on the reprimand against Dr. De Rosa.<sup>136</sup> “Will do this early in the week. Thanks for the reminder,” Dr. Frumkin responded.<sup>137</sup>

Inexplicably, however, on Monday, August 13, 2007, Dr. Frumkin sent an e-mail to 16 CDC staff, including Dr. De Rosa that put Dr. De Rosa in charge of preparing a revised health consultation.<sup>138</sup> “Chris, DTEM can take the lead on this,” wrote Frumkin. Asked to explain why, if he had legitimate concerns with Dr. De Rosa’s management abilities, behavior or scientific analysis, he would place him in charge of overseeing the revised health consultation, Dr. Frumkin said simply: “Chris was our senior toxicologist, for better or worse.”<sup>139</sup>

Dr. Frumkin could have easily given the lead on the “revised” health consultation to another ATSDR Division, such as the Division of Health Assessment and Consultation (DHAC). But he didn’t. If there were truly issues that warranted an official “reprimand,” it seems to demonstrate extraordinarily poor judgment to place Dr. De Rosa in charge of one of the agency’s most important public health endeavors. Yet, that is exactly what Dr. Frumkin did.

In the end, Dr. Frumkin never sent the official reprimand to Dr. De Rosa. Dr. Frumkin did, however, remove Dr. De Rosa from his role overseeing the revised health

<sup>132</sup> E-mail dated July 24, 2007 from Chris De Rosa to Mike McGeehin et al., “Re: FEMA Announces Trailer Air Testing Plans.”

<sup>133</sup> Draft “Official Reprimand” from Howard Frumkin to Chris De Rosa, as drafted by Tom Sinks.

<sup>134</sup> E-mail dated July 19, 2007 from Tom Sinks to Howard Frumkin and Carol Aloisio.

<sup>135</sup> E-mail dated July 22, 2007 from Howard Frumkin to Tom Sinks.

<sup>136</sup> E-mail dated August 10, 2007 from Tom Sinks to Howard Frumkin and Carol Aloisio.

<sup>137</sup> E-mail dated August 10, 2007 from Howard Frumkin to Tom Sinks.

<sup>138</sup> E-mail dated August 13, 2007 from Howard Frumkin to Christopher De Rosa.

<sup>139</sup> Subcommittee staff interview with Dr. Howard Frumkin, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., February 26, 2008.

consultation in September and placed Dr. Mark Bashor, his Associate Director for Science, in charge of finalizing the report. One reason Dr. De Rosa was removed, says Dr. Sinks, is that he was making unfounded scientific assertions about reproductive health effects of formaldehyde. Dr. Sinks said there are no proven reproductive health effects from formaldehyde exposure.<sup>140</sup> In fact, there are some suggestive but not definitive studies that point to a link between reproductive health effects and exposure to formaldehyde.

The revised October 2007 formaldehyde health consultation included reference to reproductive health studies from the International Agency for Research on Cancer (IARC), which classified formaldehyde as a known human carcinogen in 2004. "IARC has recently reviewed 11 epidemiological studies for reproductive effects associated with formaldehyde exposure," the report noted.<sup>141</sup> "Based on its review, IARC concluded that: "Inconsistent reports of higher rates of spontaneous abortions and lowered birth weights were reported among women occupationally exposed to formaldehyde. Studies of inhalation exposure to formaldehyde in animal models have evaluated the effects of formaldehyde on pregnancy and fetal development, which have not been clearly shown to occur at exposures below maternally toxic doses."<sup>142</sup> "Other reviews have concluded that additional research is needed to better define the reproductive and developmental risks posed by exposures to formaldehyde,"<sup>143</sup> the October health consultation concluded.

In the revised October health consultation, Dr. De Rosa was pushing to include recommendations to begin "health interventions" regarding the residents of the FEMA trailers. Essentially, he was calling for them to be informed about *all* of the potential health risks they faced within the trailers, and to begin to remove them from their residence if they were experiencing adverse health effects that could be due to high levels of formaldehyde. Instead, rather than concluding that health interventions should be "implemented," as Dr. De Rosa argued, the final report said effective health interventions should simply be "identified."<sup>144</sup> This difference further delayed any real action on the part of either the CDC or FEMA.

On September 21, 2007, days after being removed from his role overseeing the revised health consultation, Dr. De Rosa wrote a blistering letter to Dr. Frumkin raising his concerns that ATSDR was failing to protect the public's health on the formaldehyde and other issues. "On multiple occasions during the first six months of this year," wrote Dr. De Rosa, "you have opposed the release of information to the public on several important

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<sup>140</sup> Subcommittee staff interview with Dr. Tom Sinks, ATSDR/CDC, Atlanta, Georgia, February 13, 2008

<sup>141</sup> "ATSDR October 2007 Revised Health Consultation."

<sup>142</sup> International Agency for Research on Cancer, Formaldehyde, 2-Butoxyethanol and 1-*tert*-Butoxypropan-2-ol [monograph on the Internet]. Lyon, France: World Health Organization; 2006. [cited 2007 Sep 27]. Available from: <http://monographs.iarc.fr/ENG/Monographs/vol88/volume88.pdf>.

<sup>143</sup> "ATSDR October 2007 Revised Health Consultation."

<sup>144</sup> On September 18, 2007, Dr. De Rosa submitted his final version of the revised health consultation, before he was removed from leading that effort. In it, he wrote: "Based on the data reviewed here, further analysis of exposure conditions and potential health effects in occupied FEMA trailers is warranted. In the meantime, health interventions to mitigate or interdict exposure and potential health effects should be implemented to safeguard the health and safety of persons living in FEMA trailers in the Gulf region and elsewhere." The October 2007 health consultation was changed to read: "Efforts to characterize exposure conditions and potential health effects in occupied FEMA trailers are warranted. Likewise, effective interventions to reduce the levels of formaldehyde and duration of exposure and potential health effects should be identified."

health issues.”<sup>145</sup> The following month, as part of his annual review, Dr. De Rosa received an “unsatisfactory” performance evaluation and was removed as director of the Division of Toxicology, a post he had held with distinction for the previous 16 years.

In 2005, Dr. De Rosa had been rated “exceptional” in his annual performance assessment, provided with a 5-percent pay increase and was ranked eight out of 26 employees in the Senior Biomedical Research Service (SBRS) within ATSDR.<sup>146</sup> In 2006, Dr. De Rosa was again rated as “exceptional” and received a 4.1-percent pay increase and a \$10,331 bonus.<sup>147</sup> When he received his “unsatisfactory” performance assessment in October 2007, Dr. De Rosa said that he was told by Dr. Sinks that he wasn’t a “team player.”<sup>148</sup>

In their attempts to document their rationale for Dr. De Rosa’s “unsatisfactory” performance assessment, Dr. Frumkin wrote on Dr. De Rosa’s performance appraisal form: “EXECUTIVE DID NOT ATTEND SCHEDULED MEETING.” Yet, documentation provided to the Subcommittee by Dr. De Rosa clearly shows that Dr. Frumkin rescheduled Dr. De Rosa’s planned performance assessment meeting at least four separate times. Dr. Frumkin rescheduled the meeting for the last time from 4:00 p.m. to 3:00 p.m. on Oct. 22, 2007 just a few hours before the planned meeting.<sup>149</sup> “Can we move the de Rosa meeting to 3:00?” Frumkin asked his secretary in an e-mail. “That will get me to the airport more easily (weather!),” he wrote.

As a direct result of the poor weather and the last minute scheduling by Dr. Frumkin, Dr. De Rosa was unable to make the meeting. What Dr. Frumkin did not include on Dr. De Rosa’s performance evaluation form, however, was the fact that Dr. De Rosa called to inform him that he would be unable to make the meeting and instead, Dr. Frumkin, Dr. Sinks and Dr. De Rosa had a brief performance assessment via telephone.

Dr. Frumkin hand delivered his written performance assessment of Dr. De Rosa, which indicated that he was being removed as Director of DTEM, at the annual Ramazzini conference they both attended in Carpi, Italy, a few days later. Both Dr. Frumkin and Dr. De Rosa are fellows of the Collegium Ramazzini, an independent consortium of 180 internationally renowned experts in the fields of occupational and environmental health.<sup>150</sup> The stated mission of the Collegium Ramazzini is “to be a bridge between the world of scientific discovery and the social and political centers which must act on the discoveries of

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<sup>145</sup> Letter dated September 21, 2007 from Christopher De Rosa to Howard Frumkin.

<sup>146</sup> “Title 42/SBRS [Senior Biomedical Research Service] Final Ranking for CCEHIP [Coordinating Center for Environmental Health and Injury Prevention],” 2005. The CCEHIP is part of the CDC and includes the National Center for Environmental Health (NCEH) and the Agency for Toxic Substances and Disease Registry (ATSDR).

<sup>147</sup> “CCEHIP T42/SBRS Performance Pay,” 2006.

<sup>148</sup> Subcommittee Staff interview with Dr. Chris De Rosa CKCKCK DATE CKCK

<sup>149</sup> Dr. Frumkin updated his Outlook calendar with the new time for the 3:00 p.m. meeting at 12:33 p.m. on Oct. 22, 2007. Dr. De Rosa was informed of the change just hours before his planned meeting. Dr. De Rosa was copied on that change by Louise Williams, Dr. Frumkin’s secretary, who wrote: “Rescheduled for 3 pm to accommodate travel schedule for Dr. Frumkin.”

<sup>150</sup> Collegium Ramazzini: <http://www.collegiumramazzini.org/>

science to protect public health” and “to translate to legislators, regulators and other decision makers the policy implications of scientific findings.”

## **B. Retribution?**

After poring through thousands of pages of documents and conducting dozens of interviews, it seems evident to the Subcommittee staff that Dr. De Rosa was clearly retaliated against for his persistent attempts to push ATSDR to act more assertively in its response to the formaldehyde and other issues. It also seems clear that there was a pattern of retribution against Dr. De Rosa by ATSDR leadership. In July 2007, days after the impending release of the Great Lakes Report was cancelled, Dr. Sinks drafted an official “reprimand” letter to Dr. De Rosa on behalf of Dr. Frumkin. But the letter was never sent. On September 21, 2007, Dr. De Rosa wrote Dr. Frumkin a scathing letter that charged that the Director’s Office had diminished, delayed, or denied the release of critical public health information, including the Great Lakes Report and the formaldehyde health consultation. Dr. De Rosa received his “unsatisfactory” performance assessment just one month later, on October 24, 2007. On January 28, 2008, Investigations & Oversight Subcommittee Chairmen Brad Miller and Nick Lampson, Chairman of the Energy & Environment Subcommittee, wrote a letter to Dr. Frumkin regarding the agency’s handling of its FEMA formaldehyde health consultation, and mentioning Dr. Christopher De Rosa. Less than one month later, on February 21, 2008, Dr. De Rosa was placed on a 90-day Performance Improvement Plan (PIP), often a prelude to termination at federal agencies for senior executive service employees.

While the timing of these events *may* be coincidental, it appears that every time Dr. De Rosa pushed, prodded or provoked ATSDR leadership, the agency’s leadership took swift action against him. In several instances, Dr. Frumkin and Dr. Sinks’ criticism of Dr. De Rosa, particularly in their correspondence with senior CDC officials, appears to be intentionally misleading and a deliberate attempt to blame others for their own mistakes, missteps or inactions. On October 24, 2007, Dr. Frumkin wrote a memo, drafted by Dr. Sinks, to Dr. Henry Falk, a senior CDC official, which was used to justify De Rosa’s “unsatisfactory” performance evaluation.<sup>151</sup> It said, in part: “His [Dr. De Rosa’s] staff became involved in a project to assess formaldehyde levels in unoccupied FEMA trailers in June 2006. His staff took it upon themselves to engage in this long-term, non-emergency evaluation. They were technically unprepared to do the work. In addition, they took direction from a FEMA lawyer without consulting their supervisors. The ATSDR consultation resulting from their work was of inadequate quality and has since been revised.”

Drs. Frumkin and Sinks used similar assertions in a staff wide e-mail they sent on October 12, 2007<sup>152</sup> and in a “counseling” letter to one of Dr. De Rosa’s branch chiefs on November 8, 2007, signed by Dr. Ed Murray, who replaced Dr. De Rosa as acting director

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<sup>151</sup> “Frumkin Memo to Falk.”

<sup>152</sup> Email dated October 12, 2007 from Tom Sinks to CDC Staff, “PLEASE READ – Procedures related to Outside Contacts – on behalf of Dr. Frumkin.”

of DTEM.<sup>153</sup> In an interview with Subcommittee Staff, Dr. Sinks said he “helped” Dr. Murray write the “counseling” memo.<sup>154</sup> But Dr. Murray had a different recollection of events. “I didn’t write the letter,” said Murray sharply. “I signed the letter.”<sup>155</sup>

The letter from Dr. Frumkin to Dr. Falk, which was drafted by Dr. Sinks, asserts that Dr. De Rosa’s “staff took it upon themselves to engage in this long-term, non-emergency evaluation.” Dr. Sinks clearly knew, or clearly should have known, that this accusation was completely false. In fact, in June 2006, Dr. Sinks was briefed on FEMA’s request for assistance from ATSDR and personally gave approval for Dr. De Rosa’s staff to engage in this work. In an interview with Subcommittee staff, Dr. Sinks said he did, in fact, recall being approached by Don Benken, the associate director of OTPER about the initial conference calls with FEMA and the EPA, and FEMA’s request for assistance. Benken asked Dr. Sinks what the response from ATSDR should be and whether or not ATSDR wanted to “engage” with FEMA on the formaldehyde issue. “Basically I said yes, we should be engaged,” Dr. Sinks told the Subcommittee staff.<sup>156</sup> Although Dr. Sinks drafted the letter to Dr. Falk suggesting “staff took it upon themselves to engage in this long-term, non-emergency evaluation,” he undoubtedly knew or should have known that was a completely inaccurate statement.

Dr. Frumkin and Dr. Sinks both said that they assumed Dr. De Rosa was aware of the health consultation and had reviewed it. Further, they blame him in the letter to Dr. Falk for not being aware of the work of his Emergency Response staff. Neither of them, at any time, however, asked who else had seen or reviewed the health consultation or suggested that anyone else should review it. Today, they both say that Joe Little and Scott Wright were the wrong individuals to conduct the health consultation, yet both Dr. Frumkin and Dr. Sinks were aware of who was working on the formaldehyde health consultation before the report was released and did absolutely nothing about it.

Again, they attempt to blame Dr. De Rosa for this fact and say he should have been engaged in the oversight of the health consultation. They argue that Dr. Frumkin’s OTPER was only involved in “coordinating” and not “clearing” the February health consultation. However, the report’s authors, Scott Wright and Joe Little, who work for Dr. De Rosa’s former division of toxicology had a different interpretation and believed the document was “cleared” by both OTPER and the Office of the Director. After all, they say, both Dr. Frumkin and Dr. Sinks saw and reviewed the report before it was released.

Virtually any observer would agree with Dr. Sinks and Dr. Frumkin that the original health consultation “was of inadequate quality.” Given that fact, however, it is inexcusable that it took them a full eight months to issue a new report. Yet, neither of them blames themselves for their lethargic response to this important public health issue.

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<sup>153</sup> Counseling Memo from Dr. H. Edward Murray, Director (Acting), Division of Toxicology and Environmental Medicine (DTEM), Agency for Toxic Substances and Disease Registry (ATSDR) to DTEM Branch Chief, Subject: Management Notification of Highly Sensitive Issues, Nov. 8, 2007.

<sup>154</sup> Subcommittee staff interview with Dr. Tom Sinks, ATSDR/CDC, Atlanta, Georgia, Feb. 13, 2008.

<sup>155</sup> Subcommittee staff phone interview with Dr. Ed Murray, February 18, 2008.

<sup>156</sup> Subcommittee staff interview with Dr. Tom Sinks, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 24, 2008.

### C. Passing Blame

Joe Little and Scott Wright were so disturbed by Dr. Frumkin and Dr. Sinks' repeated attempts to blame them for the failings of the February health consultation and Dr. Frumkin and Dr. Sinks' lack of candor regarding their own involvement in reviewing and approving the report, that they went to the CDC ombudsman to issue a complaint.<sup>157</sup> They told the ombudsman that they believed both Dr. Frumkin and Dr. Sinks were using them as "scapegoats" regarding the formaldehyde issue.<sup>158</sup> Little and Wright said that Dr. Frumkin chastised them in both internal ATSDR meetings in July, August and September 2007 and in the October 12, 2007 e-mail sent by Dr. Sinks on Dr. Frumkin's behalf to every employee in the 1,000-person agency<sup>159</sup> without Dr. Frumkin ever acknowledging his own role in reviewing or approving the release of the formaldehyde health consultation.

Certainly, there is no escaping the fact that as authors Little and Wright produced a health consultation of poor scientific merit. Perhaps Dr. De Rosa should have exhibited better oversight of his staff and been more aware of their activities. Perhaps he could have or should have pushed even harder than he did to rectify the failings in that report or pushed ATSDR even more aggressively than he did to take action to move occupants out of the FEMA trailers much sooner than they did.

But the top-management of ATSDR shoulders the vast bulk of the blame for not identifying any of the faults in the report, questioning its key findings or acting upon the flaws in the report once they learned of them. Having set up a "rapid response" process for Katrina products to be run out of the Office of the Director, it was Drs. Frumkin and Sinks' responsibility to ensure that the flawed data in the health consultation was quickly corrected after Dr. De Rosa informed them of the report's weaknesses.

Although Dr. Frumkin and Dr. Sinks have continually sought to shift the blame for the formaldehyde issue onto Dr. De Rosa and his staff, the Subcommittee was recently provided with a key document regarding "Clearance of Information Products" from ATSDR that was signed and approved by Dr. Frumkin on March 15, 2006.<sup>160</sup> This document was *not* provided officially by ATSDR, but was provided anonymously by a CDC employee in a letter to Chairman Miller after the Subcommittee's April 1, 2008 hearing. "Ideally, public health emergency information products developed by NCEH/ATSDR staff are reviewed by the division director or designee before they are sent to the Office of Science," the document reads. Director Frumkin's Office of Terrorism Preparedness and Emergency Response (OTPER) was the "designee" in this instance. Joe

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<sup>157</sup> Subcommittee staff interview with Joe Little, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 17, 2008.

<sup>158</sup> In the end, Little and Wright met with the CDC ombudsman on three separate occasions in September, October and November 2007. The ombudsman suggested that they meet with Director Frumkin directly to discuss their concerns. But they declined to do that since they did not see what good would come out of that proposed meeting and felt the leadership was being dishonest about their role in the formaldehyde issue.

<sup>159</sup> Oct. 12, 2007, "Procedures related to Outside Contacts," *supra*.

<sup>160</sup> "NCEH/ATSDR Policy: Clearance of Information Products," Approved: Howard Frumkin, M.D., Dr.P.H., Director, NCEH/ASTDR. Effective Date: 3/15/06."

Little and Scott Wright were dealing directly with the deputy director of that office. Furthermore, the document states: "The Associate Director for Science, the Deputy Director, or the Director determines whether anyone else should review the document."<sup>161</sup>

According to Dr. Frumkin's own policy, this was not Dr. De Rosa's responsibility. If there were problems, questions, or concerns with the production of the February 2007 formaldehyde health consultation, it was the responsibility of Dr. Sinks and Dr. Frumkin to make certain that appropriate staff reviewed the document to ensure it was scientifically sound, complete and appropriate. They both failed to do so.

That is not surprising, as virtually every ATSDR employee that Subcommittee staff interviewed from Director Frumkin on down, had a different interpretation of the appropriate agency clearance procedures for reviewing, vetting and clearing documents before release. Yet, 19 months after problems in the clearance process were highlighted by the release of the February 2007 health consultation, ATSDR has taken few steps to address this fundamental and critically important issue. The agency's Board of Scientific Counselors was recently charged with studying the agency's clearance and peer review process and expect to have a draft report completed in November 2008, a full 21 months after ATSDR's leadership became aware of potential problems in the agency's clearance process. Today ATSDR still does not even have a simple "buck sheet," check box, or other process in place in order to clearly and quickly identify who has reviewed, changed or edited a document. Furthermore, the response to these critical issues by ATSDR's leadership has been halfhearted and cavalier despite its vital importance to ensuring that the documents ATSDR produces are accurate, thorough and scientifically sound. "We try to have processes," Dr. Sinks told Subcommittee staff. "We don't live and die by processes," he said.<sup>162</sup>

### VIII. FEMA's Office of General Counsel

Perhaps, clearer "processes" would have avoided many of the problems in the agency's handling of the formaldehyde issue. In the letter to Dr. Falk, Dr. Frumkin and Dr. Sinks also blame Dr. De Rosa's staff for taking "direction from a FEMA lawyer without consulting their supervisors."<sup>163</sup> In both interviews with Subcommittee staff and internal agency correspondence Dr. Frumkin and Dr. Sinks claim they were unaware of the involvement of FEMA's attorneys in the health consultation. In addition, in the October 12, 2007, staff wide e-mail sent by Dr. Sinks and Dr. Frumkin, they say: "NCEH/ATSDR Leadership was unaware that our staff were working directly with FEMA lawyers or that supervisors had not been directly included in the work."<sup>164</sup> Those assertions are demonstrably untrue. To believe those claims would mean that neither of them ever noticed or remembered the trail of documents they were copied on that mentioned this

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<sup>161</sup> Ibid, p. 12.

<sup>162</sup> Subcommittee staff interview with Dr. Tom Sinks, Subcommittee on Investigations & Oversight, U.S. House of Representatives, Washington, D.C., March 24, 2008.

<sup>163</sup> "Frumkin Memo to Falk."

<sup>164</sup> Oct. 12, 2007, "Procedures related to Outside Contacts," *supra*.

critical fact. It is even more disturbing that they then used this issue to help justify their “unsatisfactory” performance evaluation of Dr. De Rosa.

- In June 2006, Dr. Sinks was briefed on FEMA’s interest in obtaining the assistance of ATSDR and was told FEMA’s Office of General Counsel was involved. He personally gave approval for ATSDR to be “engaged” with FEMA on this work.<sup>165</sup>
- On December 4, 2006, Joseph Little e-mailed Dr. Frumkin and copied Dr. Sinks and several other ATSDR employees providing a chronology of ATSDR’s involvement with FEMA on the formaldehyde issue. That e-mail specifically mentions the involvement of “Rick Preston from FEMA’s Office of General Council [*sic*].”<sup>166</sup>
- The very first sentence of the draft consultation reviewed by Drs. Frumkin and Sinks on January 8, 2007 said: “The ATSDR Emergency Response program was requested by the Federal Emergency Management Agency (FEMA), Office of General Counsel to review and provide an evaluation of analytical data related to a project involving formaldehyde sampling at FEMA temporary housing units located in Baton Rouge, Louisiana.”<sup>167</sup>
- On January 24, 2007, Joe Little indicated in hand-written notes that Tom Sinks asked several questions regarding the role of FEMA’s Office of General Counsel in the health consultation. “DTEM response to Tom’s Questions,” was written at the top of the page with the heading “Formaldehyde Consultation.”<sup>168</sup> “The purpose of the consultation is to provide FEMA Office of General Counsel a clearer understanding of the issues associated with formaldehyde in temporary housing units or trailers,” Little wrote. “Concerns by FEMA about this issue are due to a pending lawsuit against FEMA concerning formaldehyde exposure from temporary housing units. FEMA has requested that the sampling data and the consult to remain confidential and all inquiries be referred to FEMA OGC [Office of General Counsel].”<sup>169</sup>
- Dr. De Rosa’s draft letter to FEMA which he sent to Dr. Frumkin and Dr. Sinks on February 27, 2007, was clearly addressed to “Patrick Edward Preston, Trial Attorney, Office of Chief Counsel, Federal Emergency Management Agency.”<sup>170</sup>

Asked about how they could not have been aware of the role FEMA’s Office of General Counsel played in the ATSDR health consultation, Dr. Frumkin and Dr. Sinks both said they simply missed it. “It was simply something that did not catch my attention at the

<sup>165</sup> Subcommittee staff phone interview with Don Benken, February 25, 2008.

<sup>166</sup> Joe Little, Dec. 4, 2006 chronology.

<sup>167</sup> “Draft” formaldehyde health consultation prepared on 12/21/06 10:30 a.m., presented to Dr. Frumkin and Dr. Sinks at the Jan. 8, 2007 Issues Management Meeting.

<sup>168</sup> Joe Little, handwritten notes, “Formaldehyde Consultation,” 1/24/07.

<sup>169</sup> Ibid.

<sup>170</sup> Draft letter from Christopher De Rosa to Patrick Preston, February 27, 2007, *supra*.

time,” Dr. Sinks said during congressional testimony.<sup>171</sup> “[W]e failed to recognize the import of a contact that came from [a FEMA] attorney rather than through typical technical channels,” said Dr. Frumkin during that same hearing.<sup>172</sup> In fact, they both said that they don’t recall knowing of the role of FEMA’s Office of General Counsel until July 2007, when Congressman Waxman held a hearing on the FEMA/formaldehyde issue.<sup>173</sup>

### **IX. Congressional Testimony: Deception or Confusion?**

Dr. Frumkin and Dr. Sinks’ responses have been intent on confusing and mischaracterizing the events that unfolded regarding their own involvement in the formaldehyde issue, not only in interviews with Subcommittee staff, but during sworn Congressional testimony as well. Dr. Frumkin and Dr. Sinks submitted joint written testimony for the Subcommittee’s hearing held on April 1, 2008.<sup>174</sup> That testimony asserted that Dr. De Rosa, “the Director of the Division of Toxicology had not raised” concerns regarding the potential long-term health consequences related to chronic exposure to formaldehyde “to staff in his Division earlier, prior to release of the report”<sup>175</sup> But at the time of that testimony, it seems implausible that Dr. Frumkin and Dr. Sinks believed that Dr. De Rosa had seen, reviewed or been aware of the existence of this report before it was sent to FEMA. They never suggested that that was the case in interviews with the Subcommittee prior to the hearing, and they never provided any records to support that assertion. They did believe, however, that Dr. De Rosa could have or should have reviewed the report and they claimed they had initially assumed he had. Their choice of words in sworn testimony, however, obfuscated and confused the events surrounding the review and release of the formaldehyde health consultation. In fact, under questioning during the I&O Subcommittee’s hearing by Chairman Miller, Dr. Sinks appeared to contradict his own written testimony. “I do not believe Dr. De Rosa saw the [health consultation] document until 3 weeks after the document was issued,” said Sinks.<sup>176</sup>

Again, in his written testimony to the Subcommittee for that April 1, 2008, hearing, Dr. Frumkin implied that he was personally taking the lead in attempting to correct the flawed February 2007 formaldehyde health consultation. “I encouraged the Division Director [Dr. De Rosa] to draft a letter to FEMA highlighting ATSDR’s concerns and

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<sup>171</sup> “Toxic Trailers,” Unedited Hearing Transcript, p. 114.

<sup>172</sup> “Toxic Trailers,” Unedited Hearing Transcript, p. 114.

<sup>173</sup> Hearing on FEMA’s Toxic Trailers, Committee on Oversight and Government Reform, U.S. House of Representatives, Washington, D.C., July 19, 2007.

<http://oversight.house.gov/documents/20071114164004.pdf>.

<sup>174</sup> Joint Testimony Before the Committee on Science & Technology, Subcommittee on Investigations & Oversight, U.S. House of Representatives, “Toxic Trailers: Have the Centers for Disease Control Failed to Protect Public Health?,” Statement of Howard Frumkin, MD, DrPH, Director and Thomas Sinks, PhD Deputy Director, Agency for Toxic Substances and Disease Registry and National Center for Environmental Health, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services. (Hereafter: “Frumkin/Sinks prepared testimony.”)

[http://democrats.science.house.gov/Media/File/Commdocs/hearings/2008/Oversight/1apr/Frumkin\\_Sinks\\_testimony.pdf](http://democrats.science.house.gov/Media/File/Commdocs/hearings/2008/Oversight/1apr/Frumkin_Sinks_testimony.pdf)

<sup>175</sup> Frumkin/Sinks prepared testimony.

<sup>176</sup> “Toxic Trailers,” Unedited Hearing Transcript, p. 98-99.

clarifying the scope of the health consultation,” wrote Frumkin.<sup>177</sup> In truth, as Dr. Frumkin and Dr. Sinks must both well know, Dr. De Rosa drafted that letter on his own initiative. From the record, it seems clear that Dr. Frumkin did not “encourage” Dr. De Rosa, but on the contrary, ignored Dr. De Rosa’s repeated calls for action. Dr. De Rosa had to send his draft FEMA letter to Dr. Frumkin and Dr. Sinks on two separate occasions. Nine days after Dr. De Rosa had not heard back he had to threaten to send the letter to FEMA himself, before Dr. Frumkin finally agreed to have a letter sent to FEMA. And incredibly, while Dr. Frumkin recalls that he “encouraged” Dr. De Rosa to draft a letter to FEMA, he does not remember that the letter to FEMA was addressed to FEMA’s Office of Chief Counsel.

## X. Lessons Learned?

In October 2007, just as ATSDR was preparing to release the revised formaldehyde health consultation the CDC was gearing up to conduct much more thorough testing of “occupied” FEMA trailers on the Gulf Coast. The testing program was delayed by two months, however, because CDC and FEMA wanted to ensure they had a comprehensive test plan, communication plan and post test action plan in place before the testing started. But even before the testing had begun the CDC was working to downplay the public reaction to the potential test results. “On October 1-5, CDC Communications Team accompanied by our contractor (Porter-Novelli) made a field visit to Louisiana and Mississippi,” one internal CDC document notes. “Their preliminary reports indicate that we do not need to do a big media campaign, it would not be cost effective and *would do more harm than good by unnecessarily elevating concerns about formaldehyde*,” the report stated [emphasis added].<sup>178</sup>

In December 2007, Dr. Frumkin announced that the CDC was finally planning to begin testing of 519 “occupied” FEMA temporary housing units for formaldehyde.<sup>179</sup> In February 2008, the results of the study were released. They showed that the average levels of formaldehyde in FEMA trailers and mobile homes were 77 parts per billion (.077 ppm), about two-to-seven times higher than those in most modern homes, and above the level at which adverse health effects could begin in some individuals.<sup>180</sup>

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<sup>177</sup> Frumkin/Sinks prepared testimony.

<sup>178</sup> “FEMA Temporary Housing Units (THU) Study Update -- Lead CDC CIO: CCEHIP/NCEH/ATSDR; Lead Division: NCEH/EHHE; As of: October 19, 2007,” Reviewed by Gary P. Noonan, Approved by Michael A. McGeehin, Ph.D., Signed 10.19.07.”

<sup>179</sup> “FEMA Administrator and CDC Director to Brief News Media on Formaldehyde Testing Plan,” December 13, 2007, Centers for Disease Control and Prevention. This was actually a news conference with FEMA Administrator R. David Paulison and Director of the National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry Dr. Howard Frumkin. Available here: <http://www.cdc.gov/media/transcripts/2007/t071213f.htm>.

<sup>180</sup> “Interim Findings on Formaldehyde Levels in FEMA-Supplied Travel Trailers, Park Models, and Mobile Homes,” Centers for Disease Control and Prevention, February 29, 2008. Available here: <http://www.cdc.gov/nceh/ehhe/trailerstudy/residents.htm#final>. The results were actually released on February 14, 2008. See: “CDC Releases Results of Formaldehyde Level Tests: FEMA To Expedite Relocation Of Residents From Temporary Housing Units,” FEMA and CDC Joint Press Release, February 14, 2008. Available here: <http://www.cdc.gov/media/pressrel/2008/r080214b.htm>

At a joint CDC / FEMA news conference, the director of the CDC, Dr. Julie Gerberding, said the tests provided a snapshot of formaldehyde levels in FEMA trailers that helped the CDC “understand and confirm what we suspected all along,” she said, “that in some of these situations the formaldehyde levels are high enough where there could be a health hazard to the people who are living there.”<sup>181</sup> As a result, the CDC and FEMA said that residents of the trailers should be moved out as quickly as possible, particularly before summer when the heat and humidity are likely to increase the levels of formaldehyde in these trailers. Dr. Gerberding also mentioned the potential symptoms people might experience from exposure to high levels of formaldehyde, including respiratory symptoms, cough and irritation. Further she indicated that formaldehyde is classified as a carcinogen.

Yet, a joint CDC and FEMA flyer released at about the same time titled: “Formaldehyde Levels in FEMA-Supplied Trailers: Early Findings from the Centers for Disease Control and Prevention,” mentioned none of those things.<sup>182</sup> Given the severe criticism the CDC and FEMA had come under from Congress and the public regarding the handling of the formaldehyde issue, it was striking that this flyer – like the February 2007 health consultation – omitted critical public health data. It never mentioned the potential short-term signs or symptoms of formaldehyde exposure, including respiratory symptoms or irritation of the eyes, nose and throat. It never mentioned the potential long-term health hazards of exposure to elevated levels of formaldehyde or the suspected cancer risks. In short, this flyer, released a full year after the fatally flawed February 2007 health consultation, appeared to suffer from many of the same critical omissions prevalent in that document. Despite assurances from the CDC that they have learned from the lessons of their poor handling of the FEMA formaldehyde issue, it seems clear they continue to badly fumble the formaldehyde issue.

## **XI. Conclusion: Inconclusive By Design**

Criticism of ATSDR has been long standing. In May 1992, the Environmental Health Network and the National Toxics Campaign Fund released a 55-page investigative study titled: “Inconclusive By Design,” that was severely critical of the agency. “Two federal agencies, the Center for Disease Control (CDC) and the Agency for Toxic Substances and Disease Registry (ATSDR), bear the primary responsibility for safeguarding the nation’s environment health,” the study stated. “They are responsible for studying communities exposed to toxic pollution and wastes and making recommendations for public protection. Instead of ensuring a margin of safety and recommending measures to end public exposures to toxics, both of these agencies have routinely funded and conducted studies of effects of toxic pollution on public health which are *inconclusive by design*. These intentionally inconclusive studies have been used by polluters and

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<sup>181</sup> “CDC and FEMA Discuss Preliminary Test Results from Trailers and Mobile Homes in Louisiana and Mississippi,” CDC Media Conference Call with Dr. Julie L. Gerberding MD., M.P.H.; Director, Centers for Disease Control and Prevention and R. David Paulison, Administrator, Federal Emergency Management Agency, February 14, 2008. Available here: <http://www.cdc.gov/media/transcripts/2008/t080213a.htm>.

<sup>182</sup> CDC/FEMA Flyer, “Formaldehyde Levels in FEMA-Supplied Trailers.”

government officials to mislead local citizens into believing that further measures to prevent toxic exposures are unnecessary,” the report argued.<sup>183</sup>

Fifteen years later, ATSDR’s handling of the February 2007 health consultation on formaldehyde raises fundamental questions about the agency’s ability and willingness to fulfill its basic mission. There is no indication that the formaldehyde health consultation was intentionally mishandled, but its handling by ATSDR’s leadership makes it clear that the agency is in need of fixes starting at the very top of the agency. In February 2007, an internal ATSDR summary of the health consultation said: “In summary, the opening of windows and vents was effective in reducing formaldehyde concentrations below levels of health concern.”<sup>184</sup> In April 2007, the director of ATSDR, Dr. Howard Frumkin sent out a personal newsletter to all staff that mentioned ATSDR’s role in accessing environmental samples of formaldehyde levels in trailers that resulted in the February report. “These data indicate that in trailers with closed windows, formaldehyde levels are similar to those found in new conventional housing,” he wrote.<sup>185</sup> The day after Congressional hearings in July 2007 on this issue, Scott Wright, one of the two primary authors of the February health consultation wrote: “ATSDR emphatically stated in the conclusions [of the February report] that the levels of formaldehyde seen in trailers was of a Health Concern!”<sup>186</sup>

The February 2007 health consultation was so inconclusive, in fact, that it permitted drastically different interpretations by the very people who were in charge of producing it, reviewing it and approving it for release. The one thing the leadership of ATSDR clearly seems to agree on is that they were somehow not responsible for the flaws and failings in the February health consultation or the least bit culpable for keeping trailer residents in formaldehyde-laden trailers a year longer than necessary because of their inaction. The leadership did not do anything to inform or warn the trailer residents of potential hazards from exposure to formaldehyde or ensure that FEMA understood the potential health dangers these residents faced. The one thing ATSDR’s leadership has clearly done is to take specific actions to push the blame for its own failings on the formaldehyde issue to others in the agency, particularly Dr. De Rosa.

The actions and inactions by ATSDR’s leadership highlights the need for continued Congressional oversight and investigation of the agency’s programs and leaders. Based on ATSDR’s recent performance it is difficult to see how the public or Congress can have any confidence in the agency to successfully fulfill its mission “to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances.”<sup>187</sup> The

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<sup>183</sup> Environmental Health Network, *Inconclusive By Design: Waste, Fraud, and Abuse in Federal Environmental Health Research*, May 1992. <http://www.ejnet.org/toxics/inconclusive.pdf>.

<sup>184</sup> (CKCK) Email dated February 2, 2007 from Richard Nickle to Chris De Rosa, Howard Frumkin, et al., “ATSDR Emergency Response Weekly Activity Report – 2/01/2007.” (CKCKCK)

<sup>185</sup> Email dated April 6, 2007 from Howard Frumkin to NCEH/ATSDR staff, “Newsletter.”

<sup>186</sup> Email dated July 20, 2007 from Scott Wright to Sascha Fielding, Joseph Little cc’d, “RE: IMPORTANT FEMA trailer hearing re ATSDR.”

<sup>187</sup> Statement of Mission, Agency for Toxic Substances and Disease Registry (ATSDR), available here: [www.atsdr.cdc.gov/mission.html](http://www.atsdr.cdc.gov/mission.html)

agency's leadership has failed the public, they have failed Congress and they have failed, most of all, their own dedicated employees. Spending their time and energy on finding others to blame for their own failures is not the sort of leadership the agency needs or the public deserves. Yet, that is exactly what they have done. It seems unlikely that ATSDR will be capable of fulfilling its core mission of protecting the public health until they have capable leaders willing and able to lead the agency and serve the public.